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# Comparative Study of the Concept and Practice of Tele-working in Estonia, Ireland and Wales-UK

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## 1- EXECUTIVE SUMMARY

### Key Issues

Country Specific Recommendations and Proposals; Future Research, Policy (please refer to independent document at [www.Equinex.newport.ac.uk](http://www.Equinex.newport.ac.uk))

## 2- PURPOSE OF THE STUDY

### Context

This Transnational Comparative Study was commissioned by The Equinex Development Partnership, a Welsh EQUAL partnership funded under round two of the Community European Social Fund Initiative and supported by the Welsh Assembly Government.

The partnership has been developed to innovatively address some of the inequalities and barriers faced by disadvantaged people when trying to access employment, training and educational opportunities.

The Equinex project has a Transnational Cooperation Agreement with development partnerships in Estonia and Ireland. This transnational cooperation presents an opportunity to explore current practices of teleworking across each of the three member states.

**To conduct a comparative study of the concept and practice of teleworking in Estonia, Ireland and Wales- UK, to explore how teleworking might facilitate employability amongst the disadvantaged people and others seeking employment in peripheral regions and excluded communities.**

**The definition of teleworking as a guiding principle for this report has been agreed by the Transnational partnership as follows:**

*‘Working at a distance from the employer’s main premises using information and communication technologies’*

*This excludes home working which is usually associated with self-employed/free-lance. The perspective for the purpose of this report is that of the employee.*

The purpose of this research proposal is to present evidence of teleworking initiatives that have worked well and to learn from those that have not worked well. The paper will seek to identify good practice (when things work well and can be duplicated elsewhere), promising practice (when practice is in the early stages of development and has yet to be evaluated)

effective practice (when something is working well but can only be achieved under similar conditions) and best practice (when something is working at the highest level).

***Note: Definition(s) of practice described above and the levels of transnational working described below are those stated in the ECOTEC (EQUAL programme managers for the UK guide).***

The comparative study will engage the partners across five levels of transnational working:

- **Exchanging information and experiences** – as a natural process of working jointly in collating evidence of current practice in member states, the partners will exchange information and experiences of teleworking.
- **Exchanging trainees, trainers and staff** – partners from Estonia will fund the mobility of a staff member to work in Wales to champion teleworking, exchange practice and information and support in the researching and collating of evidence for this paper.
- **Developing innovative approaches with transnational partners** – this joint piece of work offers an opportunity of exploring new ways of working. In collecting, collating and analysing the current practices of teleworking it may be fitting to explore the concept in terms of European mobility in teleworking and/or it may offer opportunities of:

**Importing, exporting or adopting new approaches** – as an example it may be that a model could be adopted to support disadvantaged groups into employment or self employment.

**Developing a product or a system with transnational partners** - the final product of this work will culminate in a comparative study report to be disseminated to inform policy for instance:

At EU level there is a drive to develop, encourage and promote knowledge economy.

At UK level there is the Work Wise initiative that promotes flexible working.

In Wales there is the Work Life Balance strategy that supports flexible employment.

## Research Methodology

The methodology framework includes both primary and secondary data collection, as well as the showcasing of one or two of the four good practice examples. The study has been conducted within a multi-disciplinary approach using our expertise in applied and academic research, social enterprise and Tele-Working/Home-Working research areas and long established experience of the EQUAL initiative and working with European partners.

For the purpose of this study the definition of Tele-Working provided in the tender brief has been used as a term of reference. The definition of levels of good practice and levels of transnational working provided by the Ecotec guide was embedded in the methodology.

The **primary data** has been drawn from semi-structured interviews, which provide the basis for the regional case studies, aimed to present both Employer and Employee experience of Tele-Working / Home-Working.

The **secondary data** has been extracted from the literature review of significant published materials, initiatives and relevant data that highlight Tele-Working initiatives and seeks to identify and compare levels of good practice in Estonia, Ireland and Wales-UK. In order to frame the scope of the comparative study, the materials reviewed will not be more than 6 years old, unless their significance justifies inclusion in the study.

The Tele-Working / Home-Working key findings will be drawn from data gathered on the specific elements of:

- Current initiatives in the three member regions: Estonia, Ireland and Wales-UK
- Long standing examples of good practice from Canada, Australia, and USA
- Technology available to facilitate Tele-Working and Home Working
- Companies/Organisations that have adopted Tele-Working / Home-Working policies and practices in each of the member regions
- Sectors conducive to Tele-Working / Home-Working practices in any or all of the three member regions
- Operational infrastructure/technology adopted by TeleWorkers/Home-Workers
- 
- Barriers to Tele-Working / Home-Working – Employer/Employee

- Sustainability and wider economic impact of Tele-Working /Home-Working

The data has been gathered via:

- Regular attendance at Equinex partnership meetings
- Regular collaborative work and consultation with regional and transnational partners
- Literature searches
- Internet searches
- Semi-structured interviews
- Consultation with regional and European initiatives
- Regular progress updates both at domestic and transnational levels

### **3- CURRENT TELEWORKING HOMEWORKING CONTEXT AND BACKGROUND**

In order to put into context current teleworking initiatives and which sectors are practicing teleworking, one must consider the study's adopted definition, societal considerations together with an overview of the different types of teleworking.

#### **Definition of Teleworking**

##### ***Teleworking is not a job but a method of working***

Teleworking according to Sensis (2005) has been primarily defined as working away from your usual workplace during normal business hours aided by some form of technology. ATAC (2006) adopted a working definition of telework to include work undertaken, either on a full-time, part-time or occasional basis, by an employee or self-employed person, which is performed away from the traditional office environment, including from home, which is enabled by ICT, such as mobile telephony or the internet. Telework is a form of organising and/or performing work, using information technology, in the context of an employment contract/relationship, where work which could be performed at the employer's premises, is carried out away from those premises on a regular basis. This agreement covers teleworkers. A teleworker is any person carrying out telework as defined above (CEC, 2001).

Whilst there are many definitions of teleworking, for the purpose of this comparative study, the definition below was the one chosen to guide the research:

***‘Working at a distance from the employer’s main premises using information and communication technologies’***

## **Societal Considerations**

There are a number of different methods that have so far been used (either explicitly or implicitly) to predict and explain the societal effects of teleworking, and in which the effect of teleworking can be conceptualised. In general, two perspectives can be identified:

***Futurism/utopianism:*** teleworking is assumed to be a community-friendly work mode - it increases social participation. Teleworkers, motivated by social isolation at home, reduced time on communication and renewed sense of community, are more involved in civic activities.

***Technological determinism:*** teleworking is assumed to be a community unfriendly form of work that decreases the need for face-to-face communication and can lead to a society of isolated individuals.

Although both perspectives attribute the causality of changes in society to the penetration of technology into people’s lives, including work, the first takes an optimistic position while the latter predicts negative societal consequences (Graham and Marvin, 1996).

According to the study carried out by Kamerade and Burchell in 2004 called “Teleworking and participatory capital: Is Teleworking an isolating or a community friendly form of work?”. Teleworking is a community-friendly form of work, opposing forecasts of a trend towards an ‘autistic’ society facilitated by teleworking and the stereotypical image of the teleworker as a socially isolated individual. This study reveals that teleworking actually may be one of the opposite trend – people’s engagement in the life of the community. According to the findings of this study, even allowing for demographic variables, occupational status and the nature of work variables, teleworkers tend to report greater participation in voluntary/charitable, political and trade union activities, than non-teleworkers. As such, it can be concluded that teleworking is considered as a community-friendly form of work, increasing the likelihood of participation in voluntary/charitable and political/trade union activities.

## Types of Teleworking

Types of Telework and Teleworkers:

- **Home Telework:** the traditional form of telework, where the worker undertakes paid employment from home by means of information and communication technologies (ICTs). Work could be undertaken full or part-time whether as a direct employee or self-employed.
- **Telecottages/Telecentre teleworker:** these offices or workcentres are equipped with ICT facilities for on-site work for teleworking to remote locations; such facilities may be shared by a number of commercially-oriented organisations, their employees, independent freelance professionals, small businesses and others.
- **Nomadic workers:** workers who are mobile, using portable equipment and telecommunications facilities to maximise their time 'on the road' or at customer's premises.
- **Distance (remote) offices:** firms reorganise across space. In some cases, they may centralise functions and use ICTs to site these offices at lower cost locations. In others they may redesign services around the use of ICTs – e.g. in call centres or telecentres.
- **Telecommuter:** part-time at home and part-time in office.
- **Mobile teleworkers:** on the move (NACT, 1999) (POST, 1995).

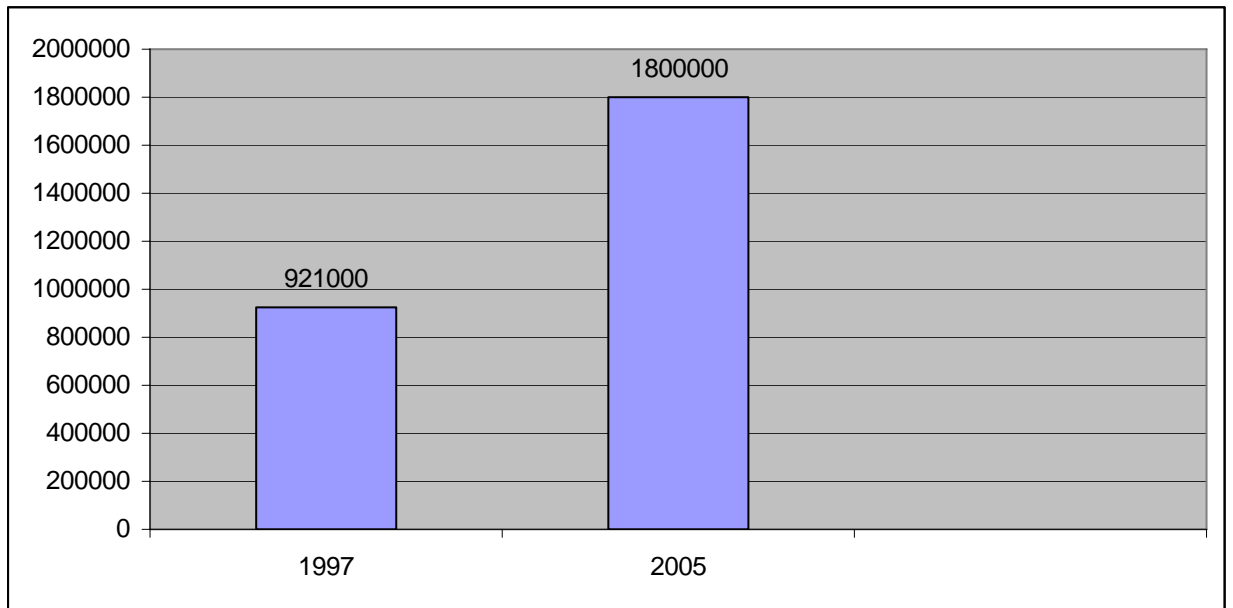
## Current Teleworking Context and Background

### Wales/UK

Under UK law, since April 2003, parents with disabled children or children under six have the right to request flexible working, including to telework if they so wish. Employers are under a duty to give serious consideration to such requests. The right to request flexible working enables an employee to apply for any changes they wish to their method of working and working hours. As such, they may wish to request to work remotely, (DTI, 2003). In the public and private sector, telework is voluntary for the worker and the employer concerned. Teleworking can be required as part of a worker's initial job description or it may be engaged in as a voluntary arrangement subsequently as with most initiatives; teleworking is best introduced on the basis of consensus. Someone forced to telework is unlikely to be as motivated or productive as someone who does so willingly.

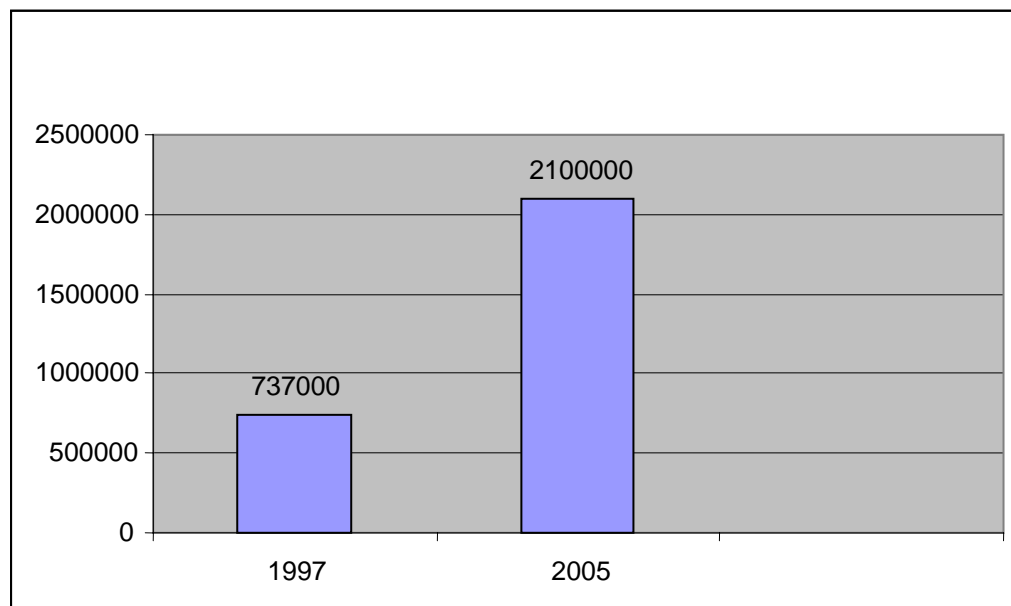


- Teleworker numbers jumped from 921,000 (4% of workers) in 1997 to 1.8 million in 2005 in the UK (8% of all workers), (ONS, 2005). This shows an increase of around 95% as shown in Figure 1.



• **Figure 1: Teleworker numbers**

- Looking at a narrower definition of teleworkers – those who could not work without using both a phone and a computer – the numbers rose from 737,000 in 1997 to 2.1 million in 2005, this shows an increase of 185% (ONS, 2005), illustrated in Figure 2 below.



**Figure 2: Number of Teleworkers using phone and computers**

- The data suggests that in total 3.1 million people in the UK worked mainly in their own home in 2005, (ONS, 2005).
- In 2002 it was estimated that the European Union had around 10 million teleworkers, representing 13% of the total workforce, (SUSTEL, 2003).
- In Wales, only 6% of the workforce is involved in teleworking, less than half that number, as in areas such as the south east of England and London, (Jones-Evans, 2005).
- The number of people working from home in Wales is falling – bucking the national trend. Statistics from the Trades Union Congress show that the number of home workers fell from 52,000 to 50,000 in the last seven years putting Wales below the national average, (James, 2006).

More in depth data is needed to illustrate the cause/effect and decline of homeworking in Wales and its implications on teleworking.

## Estonia

Estonia has taken significant steps towards the information society. Over the past decade Estonia has witnessed the expansion of the availability of Internet access, high-quality IT solutions and e-services. The successful development of ICT infrastructure has been driven by the innovative mindset both in the public and private sector. The Estonian Information Society Strategy 2013, a sectoral development plan, states that up to the present day, information policy related activities in Estonia have laid great emphasis on developing ICT infrastructure and systems necessary for implementing sectoral policies.

In Estonia, for its 45,000 square kilometres surface area, Wireless Internet access is available in nearly 900 Wi-Fi hotspots. Wi-Fi can be used in many public places, including commuter trains, and usually the service is free. The government has also initiated a target programme, Village Road 3, with the objective to increase the availability of broadband Internet in rural and scarcely populated areas, where the private sector has no interest to invest. By the end of the programme, the penetration of broadband in remote areas will be as high as that in densely populated regions.

According to the data obtained by Work Life Barometer 2005, the use of information technology is widespread in Estonian companies. In 2005, 42%

of workers were using a personal computer, 35% were using email, 38% used the Internet and 46% used a mobile phone. The most recent Global Information Technology Report (2007) presents the Networked Readiness Index where Estonia ranks 20th. In the category of availability of e-services Estonia holds the first place among 122 states.

For a small country with limited resources like Estonia, it is crucial that the advancement in the ICT domain be used for the benefit of society and development of knowledge-based economy.

The Estonian Information Society Strategy 2013 suggests that more focus needs to be placed on the development of citizen-centred and inclusive society in order to enhance the overall competitiveness of the society. For this purpose, the given policy document delineates the general framework, objectives and respective action fields. Among other activities, flexible work arrangements will be facilitated – the barriers to teleworking will be identified and appropriate solutions will be developed to overcome these. At the moment in Estonia there is no pressure on companies to introduce teleworking and there are no public policies in place to increase the share of teleworking.

However, on the basis of the previous ICT related achievements it can be said that Estonia provides a conducive environment for implementing flexible work arrangements, including telework. It is widely agreed that the practice of teleworking can be a powerful instrument for achieving balanced and sustainable economic and social development.

Telework can promote social inclusion by providing work for people who might have difficulty in travelling to and/or working in a local office, or who live in remote areas with limited local work opportunities. Research evidence suggests that teleworking gives people more opportunities to be involved in local activities as they are able to spend more time at home.

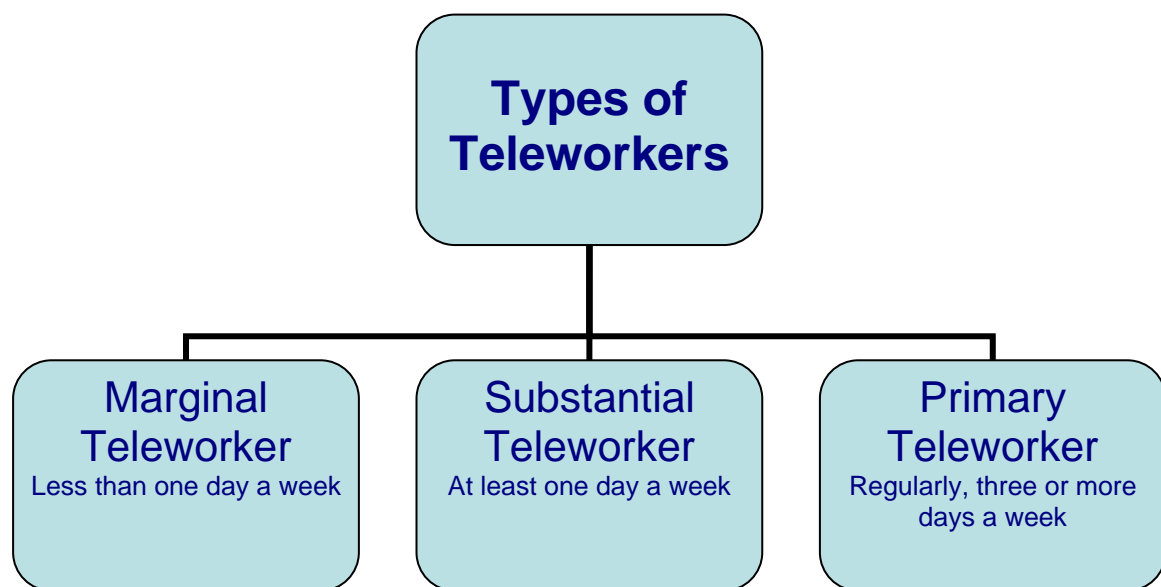
The study conducted by Burchell and Kamerade (2003) reveals that teleworking seems to be a community-friendly form of work: teleworkers report participation in voluntary activities 1.52 times more and in political/trade union activities 1.35 times more than non-teleworkers. Similar findings were reached by the SUSTEL (Sustainable Teleworking) survey (2004), with 43.5% of respondents from Denmark, 51.7% from Germany, 61.5% from Italy and 35.3% from the Netherlands stating that teleworking makes it easier for them to be involved in community activities.

The link between teleworking and higher community participation supports the argument that teleworking can be a good solution for stabilising social structure and the quality of community life in geographically disadvantaged regions.

## 4- WHO IS DOING TELEWORKING

### Types of Teleworkers

Research by Luke and Drisceoil (2005), identified the following types of teleworkers, as illustrated in figure 3.



**Figure 3: Types of Teleworkers**

The Office of National Statistics research findings in 2005 show that, according to statistics, teleworkers are a subgroup of homeworkers who use both a telephone and a computer to work at home, or in different places using home as a base has increased by over 150% since 1997, and account for 1.5 million of all people working from home.

Some interesting facts about this group of workers are that two thirds of teleworkers work in managerial, professional or associated professional occupations. Also, it is surprising to find that 65% of teleworkers are men, and that this has been increasing. In 2005, only 3% of the female workforce were teleworkers using home as a base, compared with 9% of male workers.

Current data suggests that teleworking is increasingly popular with older people, particularly those who want a paid transition into retirement, are tired of commuting, or have a retired partner at home.

Whilst there is no data regarding the number of disabled people engaged in teleworking, there is enough reference to the potential of this medium of

work as a means to enable disabled people to exploit their skills and make a positive contribution to the economy as a whole (POST, 1995). With the EU social partner agreement protecting workers' rights in place, both employers and disabled teleworkers can feel more confident about exploring teleworking methods.

According to the ONS (2005) the characteristics of Home workers and Teleworkers were as illustrated in Figure 4 below:

	All In employment	Home workers mainly in own home	Home workers using home as base	<b>total</b>	Tele workers mainly In own Home	Tele workers using home as base	<b>total</b>
Men	53	36	79	<b>68</b>	41	78	<b>65</b>
Women	47	64	21	<b>32</b>	59	22	<b>35</b>
Employment status							
Employee	87	32	35	<b>34</b>	34	37	<b>36</b>
Self-employed	13	62	64	<b>64</b>	62	63	<b>62</b>
Unpaid family worker	0	6	1	<b>2</b>	5	1	<b>2</b>
Full-time	72	49	79	<b>72</b>	53	81	<b>72</b>
Part-time	28	51	21	<b>28</b>	47	19	<b>28</b>
Occupation (SOC,2000)							
Managers and Senior Officials	16	19	14	<b>16</b>	23	22	<b>23</b>
Professional occupations	13	14	12	<b>13</b>	16	19	<b>18</b>
Associate Professional and Technical	17	23	15	<b>17</b>	26	21	<b>23</b>
Administrative and Secretarial	7	22	2	<b>7</b>	22	3	<b>10</b>
Skilled Trades Occupations	27	5	34	<b>27</b>	3	25	<b>17</b>
Personal Service Occupations	7	12	5	<b>7</b>	7	2	<b>4</b>
Sales and Customer Service							
Occupations	3	2	3	<b>3</b>	2	3	<b>2</b>
Process Plant and Machine Operatives	6	2	8	<b>6</b>	1	3	<b>2</b>
Elementary Occupations	5	1	7	<b>5</b>	0	2	<b>1</b>
Total (thousands) = 100%	<b>28,049</b>	<b>768</b>	<b>2,324</b>	<b>3,092</b>	<b>603</b>	<b>1,774</b>	<b>2,377</b>

**Figure 4: Characteristics of Home workers and Teleworkers**

The ONS data shows that the key occupations of teleworkers, primarily working from home, are:

- Associate professional and technical
- Managers and senior officials
- Administrative and secretarial

However, the key occupations of teleworkers using home as a base are:

- Skilled trades

- Managers and senior officials
- Associate professional and technical

Figure 5 below illustrates the level of full-time and part-time activities by teleworkers in 2005 as per ONS Labour market trends.

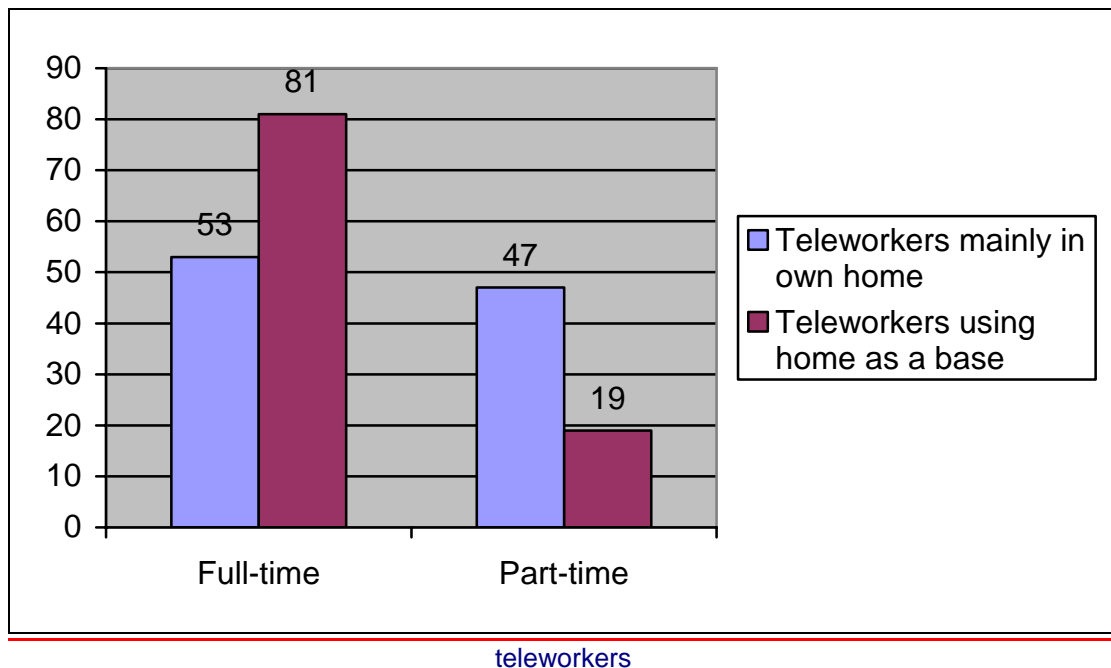


Figure 5: Level of full-time and part-time activities by teleworkers (source: ONS, 2005)

At an organisational level, a driver to implement teleworking is Work Life Balance underpinned by the legislation in 2003 regarding flexible working. The Welsh Assembly Government (WAG) in 2002 produced a guide for employers “Work Life Balance, a better way of working and living”, where a number of case studies from different sectors are presented.

## Estonia

In Estonia, apart from a few surveys and a small number of other studies, there has been a limited amount of research conducted on teleworking, with the earliest documents dating back to the end of the 1990's. Unfortunately there are no national statistics on teleworking from a longer period, which makes it difficult to monitor the uptake of teleworking practices over the years. However, it is obvious that teleworking is not a recent phenomenon and it has been used for a number of years – although usually organisations have no policies to regulate the practice of homeworking or teleworking and it rather takes place on an ad hoc/informal basis.

In Estonia, the most comprehensive (and also, pioneering) survey on teleworking was carried out by Ariko Marketing in 2002. Telework was

defined as working away from the employer's premises using the means of ICT. Of the 300 companies that were interviewed, 22% had used teleworking over the last ten years. The figure was higher among small companies with fewer than 10 employees, in business and ICT sectors and in Tallinn, the capital city.

According to the survey findings, 92% of the workforce had never used teleworking, 5% had teleworked before but were not doing so currently. **Nearly 4% of the working population were teleworking**, with 40% of full time teleworkers and 60% of occasional teleworkers.

Teleworking rates were highest in sales and customer service occupations and in accountancy. The majority of teleworkers were men. In 2002, the teleworking rate for men was 30% higher than that of women. In 85% of the cases teleworking was done on the employer's initiative.

A survey conducted by Cranet (the Cranfield Network on Comparative Human Research Management) two years later, in 2004, revealed that the proportion of organisations that use teleworking had slightly increased – compared to 22% in 2002, 26% of organisations (including private and public sector) used teleworking. Homeworking was practiced by 19% of organisations more common in the public sector.

According to the Work Life Barometer 2005, a quarter of respondents were doing telework either sometimes (20%) or continuously (3%). Telework was defined in the survey as working at home. The majority of respondents (56%) had never done such work nor were they interested in doing so; only 7% of respondents are interested in doing telework but have never done so. Those who had used teleworking were doing so for, on average, 9.5 hours per month. Some 47% of teleworkers used their own ICT equipment, 20% used the employer's equipment, and the remainder used partly their own and partly their employer's equipment.

## **Wales**

In Wales, Chwarae Teg is the organisation with the role to promote Work Life Balance and Women's Economic Development. Over the years, Chwarae Teg has been a key independent advisor in taking public, voluntary and private sector organisations through the process of piloting and implementing Home Working Policies and flexible working practices.

Back in 2004-2005, through the SME Challenge Fund (Grant), Chwarae Teg engaged with SMEs in Wales, with a view to giving them independent



guidance and support whilst undertaking a review of their working practices with the aim to introduce Homeworking as a strategic business tool.

Two years on when some of the SME Challenge Fund participants were contacted with the purpose of reviewing their current practices “*where are you now*”, it became apparent that the initial engagement with the initiative had relied on an individual rather than the organisation. Consequently the opportunity to embed Homeworking / Teleworking within the strategic business plan of the SME (in many cases) did not take place.

The researchers consulted with Hayley Dunne - Business Development Manager at Chwarae Teg to get her expert insight on this matter.

This consultation was also of particular interest to our visiting transnational researcher from Estonia, as for the first time they had the opportunity to hear how Chwarae Teg went about making the Business Case for the adoption of flexible working practices, and, in so doing guide and support organisations through the implementation of Homeworking.

Hayley remarked that “*the fact that many SMEs do not have dedicated HR departments may contribute to the lack of embedded support for flexible working practices*”. On the other hand, flexible working practices are key to retain skilled staff in Wales and minimise the “Brain Drain”.

There is enough empirical evidence to substantiate the Social Case, and the Economic/Business Case amongst others for the adoption of flexible working practices such as Homeworking and with it Teleworking.

The great challenge is the sustainability of initiatives beyond pilot stage into an integrated business process.

## **Estonia**

The percentage of teleworkers in the labour force in Estonia is supposedly around 3-5%, which is lower than the European average. For example, in 2002, the European Union had an estimated 10 million teleworkers, representing around 13% of the total workforce (SUSTEL). Considering the ongoing rapid technological development, which makes it easy to work independent of location, it is almost inevitable that the following years will continue to bring about changes in work patterns. However, regardless of the support of the existing ICT infrastructure, more attention should be drawn to the economic, social and environmental dimension of teleworking.



As the aim of this report is to highlight how teleworking could be used for the benefit of disadvantaged people seeking employment and others **in peripheral regions and excluded communities**, we will concentrate on teleworking initiatives that are relevant in this regard.

“Implementation of teleworking and flexible work models in the islands and remote areas of Estonia” is an EQUAL initiative, financed by the European Social Fund and supported by the Welsh Assembly Government. The project aims to introduce teleworking practices to improve employment opportunities for people living in geographically disadvantaged areas.

## Background

This project takes place in the region of the West Estonian Archipelago (formed by four big islands and a number of islets). The island communities are faced with traditional problems associated with remote, rural areas, such as out-migration, depopulation and high transport costs. Due to the lack of local jobs or better income opportunities elsewhere, many people spend five days a week away from home, leaving for work on the mainland on Monday morning and returning on Friday night. According to the estimates of the local authorities in Hiiumaa, the number of commuters is believed to be around 100 people from each municipality. Hiiumaa, the second largest island of Estonia, has five municipalities with a population of approximately 10 000 people. In the long term, commuting can be a serious threat to the overall sustainability of these communities, as in many cases it is likely to result in out-migration and declining population. The tendency for out-migration is especially noticeable among young families and young people who have recently entered the labour market. The aim of the EQUAL project is to counter the trend for moving out of the area and provide access to work locally. The rationale behind the initiative is that teleworking:

- gives job access to those in geographically remote areas
- improves self-sufficiency and social structure in rural and disadvantaged areas
- increases local autonomy and diversity
- improves economic activity and employment
- counters the trend for migration to growth centres and rural depopulation
- reduces pressures for building in growing areas
- contributes to achieving sustainable regional development

Governments now realise that telework helps build sustainable economies with many environmental and social benefits. It reduces energy consumption, traffic congestion and infrastructure costs. It provides opportunities for marginalised sections of society and can allow governments to find new efficiencies in the delivery of their services to the public.

## Wales

In Wales, Chwarae Teg has been instrumental in taking public sector and SME's through the process of piloting and implementing Home Working Policies and flexible working practices.

### Public Sector Examples:

- In Bridgend Borough Council they have a tailored programme whereby they have taken away the core hours and expanded bands. This was achieved through attitudinal change, checking individuals' perception versus the reality and independent guidance.
- Cardiff City Council is implementing a blended approach including both teams (bottom up) and Corporate (top down).
- Wrexham Council Work Life Balance Package has resulted in the Planning Department being available to the public from 7.00 am to 7.00 pm, therefore greatly extending their service.
- Neath Port Talbot Council is a great example of an authority that had a very sceptical approach to flexible working practices. However, with the independent expert guidance from Chwarae Teg, which is driven by the business case they are now converted to its benefits.

Hayley remarked that the fact that the programmes are driven by the business case and independent input and support has been critical to its success.

Also noted was the effect of language on perception in the initial stages when consideration is being given to flexible working practices. Much work is done to keep the process objective and business focused.

A key benefit and opportunity Telework/Homework provides is the ability to reverse local and regional skills leakage.

In the process of conducting this study it has become apparent that there is a considerable amount of informal homeworking taking place in Wales.

The evidence also suggests a person's perception of Teleworking may lead to non self-identifying as Teleworkers, but rather as homeworkers. Overall, there is a lack of recorded qualitative data regarding the scope of homeworking and teleworking practices and the diversity of teleworkers in Wales.

## Estonia

The project stakeholders include local administrations, employees, employers and government. In order to find out about the attitude of **local authorities** to teleworking, a survey was conducted in 2005 among the municipalities of the Estonian islands region. The survey findings confirmed that in general terms, teleworking was acknowledged as a potentially valuable tool for increasing employment in rural communities. However, the respondents were able to point out very few employees or employers who were actually using telework. Although teleworking was seen as having the necessary potential to make a positive effect on regional development, not too many steps had been taken by the local authorities to encourage the use of teleworking. The local administrations have provided access to communications infrastructure, for example, by developing public Internet access points, but no other measures that might have facilitated the uptake of flexible working or teleworking have been used so far.

In order to identify interest for teleworking among **employees**, a survey was carried out among the commuters from the island of Hiiumaa in winter 2006. The questionnaires, which were placed on the ferries between Hiiumaa and the mainland, addressed two main questions:

- (1) the proportion of commuters who would be able to work on a telework basis;
- (2) the percentage of those who wish to work in a telecentre.

The survey findings revealed that over 60% of respondents work outside Hiiumaa, with 30% in Tallinn and another 30% somewhere other than the capital city. Most importantly, some 40% of those who were not doing telework actually had jobs that could be done on a telework basis, either part-time or full-time. Of those whose jobs were suitable for telework, 44% were ready to do telework part-time. About a quarter of the respondents said they would prefer working in a telecentre, whereas the remainder would prefer working from home.

The survey results indicated that a considerable share of commuters were interested in doing telework, both from a telecentre and home. Telecentres are a good solution for those who work full-time from home and therefore are exposed to a greater risk of isolation. It provides a professional office

environment for people who for some reason are not able to work from home or do not wish to do so.

The first teleworking model that was developed and implemented under the EQUAL initiative was **Health Care Telephone Counselling Service (HCCS)**. It is a family doctors' helpline which provides advice on medical problems and information on general health care service. The Equal ESF funded project assisted the service provider in developing the teleworking model of HCCS (technological and personnel requirements, training programmes), recruiting and training the staff from the islands and remote coastal areas. By autumn 2005, 22 doctors and nurses had started work on the helpline and so far the service has proved to be very popular.

Another product of the project was a teleworking portal or a web-based marketplace for freelancers ([www.proff24.eu](http://www.proff24.eu)). It is a website where service providers and their clients meet to carry out short, medium or long term projects. Proff24.eu offers services in a wide range of business categories, eg. web design, software development, translation, research, legal services etc. The portal differs from other online employment sites in that it features jobs that can be done independent of location, thus promoting teleworking on a wider scale.

### **Key Sectors**

The Office of National Statistics, in 2005, identified the key sectors active in teleworking as:

- Construction
- Agriculture and fishing
- Banking, finance and insurance
- Other services
- Transport and communication
- Manufacturing
- Energy and water

The above list shows that it is possible for a variety of public and private sectors to implement and benefit from teleworking practices.

The reality about teleworking is that it is not an option for all occupations and industry sectors. However, for some sectors, appropriately implemented, telework offers the potential to deliver important outcomes: enhanced business practices; improved financial viability through increases in productivity; reduction in certain operating costs (such as office accommodation, parking and travel); greater capacity to attract and retain quality staff (especially in tight labour markets).

## Private Sector Examples

### British Telecom

A good example of the use of Teleworking as an integrated business process is British Telecom (BT), one of Europe's leading providers of telecommunications services and has over 100,000 employees. The company began implementing teleworking in 1990 and now probably has the largest number of teleworkers of any UK organisation. Around 6,000 staff (who form only a proportion of the total number of teleworkers) are registered with the Workabout scheme. This scheme provides equipment and other support to teleworkers, particularly those who are giving up a permanent BT office space to move to a home-based/mobile working pattern. The implementation costs of the scheme have been calculated at £1,700-£3,200 per teleworker with £1,000 a year for ongoing recurring costs (Booz, Allen & Hamilton, 2006).

There are numerous forms of teleworking styles in BT from full home based, to highly nomadic, to home garaging (engineers who park their vehicles at home overnight). The primary business driver for teleworking has been more efficient use of property and business efficiency. The primary aim of Workabout is to provide support for, and to encourage office-based employees to become staff without any fixed workspace in a BT office. These staff receive a fixed amount to equip a home based work area, access to a telephone help line and other forms of assistance. Aside from altering the main work location there is no other alteration to the condition of service or employment. Employees retain the right to use BT offices to work using hot desking, hotelling and have full access from home to the BT intranet and communications systems such as conference calls amongst others.

There have been a number of drivers of teleworking at BT. They are:

- Cost control, particularly through reducing expenditure on office accommodation and increasing productivity. The savings in this area have been calculated at £9 million annually resulting from the reduction of 50% in floor-space used (Booz, Allen & Hamilton, 2006).
- Working conditions, aimed at improving general employee attendance, morale, recruitment and retention by giving them more control over the location and timing of work.
- Productivity, concerned with encouraging more efficient and effective working by employees.
- A desire to be environmentally and socially progressive.
- A desire to demonstrate that teleworking can work so that other organisations will be encouraged to adopt it.

Home-based teleworkers are afforded exactly the same protection and are covered by the same regulations as an employee in a traditional office.

They are covered by the Personal Accident Insurance and Injury Compensation schemes including all equipment.

BT continues to promote Workabout in line with other drivers to reduce costs. Workabout staff are provided with standard suites of ICT equipment depending on the nature of their work and classification under Workabout. They are also given a dedicated phone line and all new entrants are given access to the intranet and encouraged to make considerable use of the company's conferencing facilities. Most appear to do so, especially for audio conferencing (Hills, Hopkinson & James, 2002).

### **Denplan**

In addition to the BT example another company blazing the tele/home working trail is Denplan in Winchester – ranked 8<sup>th</sup> in the *2007 Sunday Times 100 Best companies to work for list* (Slater, 2007) after having ranked 11<sup>th</sup> in the *2006 Sunday Times 100 Best companies to work for list* (Moody, 2006). The company places great emphasis on work-life balance, with around 50 of its 340 staff working from home.

### **Work-Global**

Supported by European funding, BT developed high bandwidth services in the Highlands and Islands of Scotland. This provided the foundation for current initiatives, such as Work-Global.

Work-Global is supported by local and regional economic development organisations. They are a teleworking broker/facilitator, their motto is “live local, work global”. They manage a skills bank/register of over 600 highly qualified individuals based in the Western Isles. Their aim is to encourage organisations to outsource their business processes to the islands' teleworkers and stakeholders to bring in inward investment by setting up call-centres and satellite offices.

### **Overview of Public Sector**

The MATISSE (Mobile and Teleworking Initiative for a Smarter South East) pilot trial was aimed at Small to Medium Enterprises (SMEs) and the Public Sector. These two sectors had been slower to adopt new working methods and technology enabled Teleworking (meaning home, mobile or remote working methods in particular). This pilot was necessary in order to increase the numbers of business, social and economic prosperity drivers for new, more flexible, ways of working and are thankfully more than



matched by increasingly more affordable technology enabled, secure connectivity solutions.

These solutions are available to the home based worker (via Broadband) and the mobile worker (via GSM) and are supported by a growing number of neighbourhood 'touch down centres' or Wi-Fi 'Hot-Spots'. Most enterprises will acknowledge the need to improve responsiveness, enhance service levels to clients (or the general public), attract or retain key-staff, reduce energy consumption, property overheads and increase their productivity (workforce output).

The specific focus for the pilot was SMEs and the Public Sector.

Accordingly, 56 Hampshire County Council staff and 44 staff from 14 Hampshire based SMEs were recruited and took part in the six-month pilot. The data – collated from a combination of on-line questionnaires, facilitated workshops, ad-hoc feedback and in pilot diaries, has shown how Teleworking:

- **Significantly reduced commuting mileage** – 70% of participants travelled by car. The near 80 miles saved each week equates to a ***potential regional mileage saving***.
- **Reduced congestion** – 95% of the pilot participants travelled to work at peak time with an average daily un-productive journey time of 2.2 hours.
- **Reduced stress** – the daily commute was cited as a significant contributor to 'stress levels'.
- **Reduced commuting costs** – average savings of almost £80 per month were achieved by car users (based on cost of ownership at 40p per mile).
- **Improved Productivity** – at the Mid Pilot Workshop – between 75% and 80% of participants agreed Teleworking was making them more productive. Post Pilot – Managers reported 87% of participants had increased their productivity (between 5% and 25%). Significantly, quality and accuracy of work also improved.
- **Enhanced Well-Being** – the number 'strongly agreeing' their 'work-life balance was good' rose from 12% (pre-pilot) to 48% (post-pilot) showing an increase of 36%.. Significantly (for 'attracting and retaining staff') those 'very satisfied' in their job rose from 19% (pre-pilot) to 57% post pilot.
- **Office Accommodation** – the modest amount of occupancy data gathered suggests 20% reduction in real-estate is readily attainable or for an expanding SME the move to larger, more costly premises may be avoided or delayed. Based on existing costs, a future 20%

reduction in Hampshire County Council real-estate could save around £1 million per annum.

The challenge for Hampshire and the region as a whole, is to 'secure the future' and in particular to achieve economic growth in a smart and sustainable way. For many businesses and individuals, Teleworking will be a practical and an affordable way forward. With it comes the highly desirable outcomes of a more sustainable and economically successful region, more productive employees, a better work-life balance and more positively perceived employers who are seen to be acting in a more socially responsible manner (Corbin, 2006).

## **5- CASE STUDIES, BARRIERS AND BENEFITS OF TELEWORKING**

The data presented in this section of the report will be drawn from both primary and secondary data sources. The primary data was obtained from the case studies from both Wales and Estonia supported by the secondary data extracted from significant key documents.

### **Case Studies - Wales/UK and Estonia**

The full set of research of data collection instruments can be found in Appendix 1 and the full set of replies from Wales/UK and Estonia respondents can be found in Appendix 2 of this report.

In co-operation with the Welsh EQUAL partners, as part of the comparative study of teleworking, interviews were conducted with the employees and employers who were using telework in each region. Two questionnaires were developed for the purpose of this study, one for Human Resources (HR) managers (employers) of teleworkers and the other for teleworkers, together with a brief introduction about the study.

The findings derived from these questionnaires provide the primary data regarding barriers and benefits for managers (employers) and their teleworkers (employees).

### **Case Studies - Wales/UK**

A total of 11 questionnaires were sent out, from which 3 managers and 4 teleworkers replied.

Of the 7 replies, 5 were received in digital format and 2 were obtained over the telephone at a pre-agreed time.

When asked to consider the advantages of teleworking and homeworking, the respondents identified as the primary advantage, Work Life Balance



followed by Flexibility provided through time management (when to work) around other commitments and responsibilities. They also identified sense of empowerment (work environment, time), trust worthiness, increased loyalty to employer and increased production as well as more time for family as advantages of teleworking. These findings are similar to existing contemporary data on the drivers of teleworking/homeworking as a primary advantage for this working method.

A more in-depth study could explore if this is the case independently of the life stage of the respondents, or if these relate to a particular situational stage in an individual's life.

Furthermore, the personal reasons given for opting for a teleworking /homeworking work pattern were Work Life Balance, creativity and better time management together with flexibility, as well as saving time on travel and being more available for children and relatives. The studies respondents operate between 50% of their time and full time. The findings show that 2 of the respondents have been working with this work pattern for over 2 years, one for 4 years and another for 10 years.

When study participants were asked if they perceived that managers had difficulties coping with the introduction of teleworking and homeworking in their organisations, for three of the respondents there were no perceived difficulties for their managers. However one of the participants raised the issue of initial trust and how performance measured outputs have been a successful strategy in overcoming the initial doubts. For one of the other respondents, the introduction of the staff diary was perceived as having made staff monitoring easier.

The respondents were emphatic that the management style required to manage teleworking/homeworking needs to be output oriented, macro managed, sensitive to the need of teleworkers and their best style of work and as flexible as possible.

When asked to consider disadvantages of teleworking/homeworking, isolation and lack of face-to face-contact with colleagues was identified by all respondents as the main disadvantage. This was followed by distractions, which could either be self induced or externally provided by family and friends, who need to realise that "being at home" does not mean one does not have anything to do. The final disadvantage identified by the respondents was the potential for overworking, thus raising issues of time management, self management and the potential need for teleworkers' skills development to overcome this disadvantage.

When asked about what competencies they would need to manage teleworking and homeworking patterns, the respondents identified the

ability for good communication as the top competency followed by the ability to work independently, build trust, self discipline and time management.

The technology used by the study participants included:

- Access to broadband
- Laptops and Mac book
- Docking station for laptops
- PC screen
- Printer/Fax machine
- VoIP (Skype)
- Project Management software - Basecamp
- E-mail

## Case Studies - Estonia

We were able to collect 12 questionnaires from three different Estonian islands (Saaremaa, Hiiumaa and Vormsi), with 9 of them from the employees and 3 from the employers, as per figure 7 below:

Number of respondents from each island

	Hiiumaa	Saaremaa	Vormsi
Employees	2	5	2
Employers	1	2	0

Figure 7

The respondents were asked to give their definitions of the concepts of teleworking and homeworking, identify the advantages and disadvantages of teleworking, highlight their experiences in adopting the practices of teleworking, amongst others (Appendix 2: Interview Responses).

According to the EQUAL project interviews, the employers' concerns over teleworking and homeworking are mainly involved with communication and control problems. Exchange of information is believed to be slower and not as efficient as in the case of face-to-face interaction, which might have a negative impact on productivity. The respondents point out lack of control over working time and emphasize that an employee who works from home needs to have self-discipline. One of the risks of teleworking can be the blurring of the boundary between work and home, which is closely linked to a tendency to overwork. Also, working from home might lead to health problems if a worker does not get enough exercise.

The respondents were also asked to describe the challenges faced by their organisation regarding teleworking and homeworking. One of the aspects mentioned was a concern over the employees' work motivation which may be lower if they feel only a weak sense of involvement with their co-workers. In order to tackle this problem, this particular organisation uses different methods to increase motivation; for instance, they provide training for their employees to give them a chance to meet their colleagues and improve their skills.

Another challenge pointed out by one respondent had to do with ICT infrastructure, such as a lack of cheap and fast Internet access which would enable the organisation to use good groupware solutions. One of the respondents suggested that employers should be encouraged to adopt teleworking. It would be a good idea to demonstrate good practices and success stories in order to promote such flexible working arrangements.

From the point of view of the employees, the disadvantages of teleworking and homeworking range from a lack of sufficient communication and motivation to problems with the work environment. The respondents referred frequently to the aspect of communication, either in the context of a need for direct, face-to-face communication and closer links with co-workers or in the sense of problems related to the availability of Internet access. One respondent commented that a person who works from home is likely to suffer from a feeling of isolation because of a lack of opportunities for co-operation and a weaker involvement with colleagues. Teleworking can also give rise to the blurring of work and personal life as an employee is more exposed to the risk of overworking. It was pointed out that sometimes other people find it hard to understand that a person working from home is a regular worker although he or she does not go to an office every day. Another respondent suggested that professional development is more effective in a team where it is much easier to exchange ideas and experiences.

Some respondents said that their employer quite often fails to provide them with necessary equipment and they must take care of their work environment themselves. On the one hand it is expensive to buy equipment and on the other hand it consumes more time and energy to handle problems related to one's workplace.

The employers who participated in the EQUAL study considered flexibility and lower costs as the main advantages of teleworking and homeworking. All respondents pointed out greater flexibility as a benefit of teleworking but the answers also suggested that this is the case from the perspective of an employee. If an employee can have more freedom in organising his/her

working schedule, it also helps him/her to increase self-sufficiency and build higher self-esteem. Teleworking can have a significant impact on the overall structure of an organisation by abolishing the traditional hierarchical or “caste” system. Secondly, the respondents said that the adoption of teleworking practices has helped them to save premises costs and office overheads. Interestingly enough, one of the respondents stated that their organisation can save on the equipment as the employee who works from home provides herself with her own computer and software. It was also noted that in general, telework can provide an excellent opportunity to find work for people with disabilities or for women who are staying home with small children. It can give an additional income for those who cannot have a full-time job.

The employee benefits of teleworking that were mentioned most frequently by the respondents were flexible work time and opportunity to find work locally. Flexibility was understood in terms of more control over working hours, or in the words of one respondent, “I have total control over my time as I do not follow a strict work schedule. I feel more motivated to do my work because I am responsible for results.” Working from home was said to have a positive effect on productivity as well because of a pleasant, less stressful environment with fewer distractions, which helps to focus on work – “I have been a homemaker for 11 years. I am very happy with my working arrangements because I do not need to rush to the office in the morning. I am very flexible with my working hours and able to concentrate on my work.”

Only one respondent pointed out better reconciliation of work and private life or an opportunity to spend more time with one’s family as an advantage of teleworking. As might be expected from the people living in remote areas, several respondents said that opting for teleworking has enabled them to find work without having to relocate. As teleworking can be done regardless of location it can help to retain jobs in rural communities. From the employer’s point of view, teleworking can increase recruitment potential by providing access to local skills and previously unattainable labour markets. For both an employer and employee, the implementation of teleworking can result in reduced transport and overhead costs as there is no need for an employee to go to the office every day.

### **Case Study 1 - Alice Leetmaa**

Alice Leetmaa has two employers – Mauren Real Estate LLC and the State Nature Conservation Centre. She is working completely independently as a

broker for the real estate company whereas work at the Nature Conservation Centre also requires time to be spent at the office. Ms Leetmaa spends 1 to 3 days a week doing long-distance work/homeworking. This routine has now lasted for 3 years. According to her, the advantages of working from home are the pleasant working environment that one can arrange according to one's preferences, less stress and disturbing factors, less time and money spent on transport and the possibility to spend more time with one's family. The negative aspects mentioned by Ms Leetmaa are the occasionally infrequent exchanges of information and greater communication costs. She also has to guarantee that all the things she uses for work are in order and often she has to provide them herself. Naturally she also has to make sure that the working environment is in a suitable condition for work.

In Ms Leetmaa's view, other advantages of working from home are the fact that one can choose to live away from large centres and the work schedule can be drawn up with greater flexibility. Alice Leetmaa also says she is a person who prefers to spend as much time as possible at home. Her experiences with this way of working are positive although one can have problems with imposing self-discipline. The infrequency of information exchange can be a problem as it is always better to speak to people face to face. She meets her employer maybe once or twice a year, which for her seems infrequent.

Employers should be considerate towards their employees who are working further away from the centre. Alice Leetmaa thinks that people who want to work from home have to possess basic computer skills and also the ability to exchange information in an efficient manner. Strict self-discipline is certainly helpful.

### **Overview of Barriers – Managers (employers)**

A study carried out by the Australian Telework Advisory Committee expected the barriers to the uptake of this flexible work practice to be ICT-related. Rather, it was discovered that the impediments are attitudinal, educational and management related. Managers would benefit from enhanced training on the commercial, social and environmental benefits that can flow from work practices such as teleworking – that are supportive of society's changing values and practices.

Accordingly, the major barriers to the spread of teleworking cited in the Ariko Marketing survey were control and supervision of teleworkers.

Respondents felt that management attitudes were not very positive toward teleworking. Other obstacles that were mentioned included the lack of technological capacity and costs compensation for employees.

Drawbacks for employers:

- higher telecommunications and safety costs
- hard to maintain control over working time (management challenges)
- problems with employee motivation and self-discipline
- communications problems - isolation from colleagues

Similarly, The POST (Parliamentary Office of Science and Technology) report summary, 1995, suggests that the main barriers to electronic home teleworking are not technical: but of a human or organisational nature.

They include:

- The conservative nature of many organisations
- The cost of information and communications technology purchase and upgrade
- Overcoming social isolation and detaching oneself from household problems
- Providing adequate space for telework in the home
- Planning regulations regarding the use of domestic properties for commercial purposes
- Health and safety regulations applied in the home
- Taxation – e.g. whether the teleworker is self employed, or otherwise.
- Insurance may need arranging.

A survey of 350 remote workers across Europe released by IBM and the Economist Intelligence Unit found that without appropriate management support, technologies, skills and performance measures, they can end up feeling alienated, underappreciated and mistrusted, even though they work harder than their office-based colleagues. Almost 40% of those surveyed felt that their office-based colleagues believed that mobile workers were not pulling their weight. This was pronounced in the UK, where one respondent detected 'suspicion' among office-based workers towards mobile employees, (Bently, 2005).

## **Overview of Barriers – Teleworkers (employees)**

### **Case Study 2 - Urve Pill**



Urve Pill, employed by the Nature Conservation Department of the Ministry of Environment, has been doing teleworking since the year 2000. In her opinion, the advantages of this form of working from the perspective of the employer are the alleviation of personnel-related problems and lower labour costs.

Ms Pill believes that employees gain by not having to move from where they are living. Ms Pill is a teleworker 5 days a week, using email and instant messaging software as the main communication channels. Urve Pill says that she is satisfied with these arrangements because there is enough work and the salary is good. A very important aspect for her is that she can organise her work herself.

In spite of the possibilities offered by modern technology the greatest problems for someone working on a telework basis are caused by the difficulties of communication. What is lacking is the existence of a unified team and the team spirit, also one has less opportunities to socialise. Urve Pill also mentions the necessity to buy everything necessary for work. If something happens for instance to the computer, repairing it can be time-consuming. Also overcoming other potential work-related obstacles requires more energy.

Ms Pill mentions that there have been some difficulties in establishing the routine of telework with her employer. The qualities necessary for teleworking and homeworking are self-discipline, independent thinking, the courage to take decisions and solve problems. She thinks that first and foremost the employer should have a flexible approach to an employee working from home.

*The full results of the Wales/UK and Estonian questionnaires can be found in Appendix 2.*

The main barrier to the spread of teleworking cited in the Ariko Marketing survey was control and supervision problems – 37% of the respondents felt that management attitudes were not very positive toward teleworking.

Further obstacles for employees included:

- blurring of the boundary between work and leisure
- feeling of isolation
- fewer career and promotional opportunities

According to Jones, (2005) the following are barriers to teleworking worldwide:

- The patchy availability of broadband access as a faster and more flexible alternative to dial-up remote access. This is not a universal inhibitor, but it will be an issue for those teleworkers that expect to operate complex applications at network speeds while working from home.
- The sluggish expansion of managed remote access services from carriers and service providers to equip and support global teleworking projects. The managed access alternative removes the need for companies to find in-house resources to support and service a potentially global teleworking staff.
- The inability of national and international carriers to finance the upgrade of existing communications infrastructure to a level that will realistically support teleworking.
- The lack of available corporate budget to a level that will realistically support teleworking.
- The lack of available corporate budget for remote access equipment and support.
- The reluctance of commitment from national governments and wider regional organisations to improve the working conditions of employees and to tackle issues of pollution and congestion. As there is nothing so enticing to businesses as a government funded or subsidised scheme, the lack of such incentives encourages reluctant managers to shelve teleworking initiatives.

People on lower incomes may be excluded from becoming teleworkers because they lack sufficient space, may be at risk of equipment theft, or have other income-related reasons that prevent them from working from home.

In addition, social housing tenancy contracts do not allow for homeworking, thus potentially excluding some of the most disadvantaged groups from participating in economic activity. Work is underway at the Department of Trade and Industry (DTI) to address a number of barriers related to homeworking and home enterprise which includes a review of social housing contracts.

A survey conducted by CareerBuilder.com (Delaney, 2006), highlights the issues raised by the lack of flexible working patterns; 25% of working mothers expressed dissatisfaction with their work/life balance and were actively seeking jobs with more flexibility. As many as 38% indicated they had missed at least two significant events in their children's lives in the last year due to work; 10% indicated missing more than five such events; and 26% indicated that their jobs were negatively impacting on their



relationships with their children. The problem is of such severity that 52% of the respondents indicated a willingness to take a pay cut to spend more time with their children; this is an increase from 38% in 2005.

### **Case Study 3 - Irina Pildre**

Irina Pildre is working as an accountant for the NGO Eurohouse. She was forced into telework by circumstances and has now been working like this for 10 years. Pildre thinks that one of the disadvantages of working from home/telework is a sense of being isolated from other people. She is working at home every day and during busy periods also at weekends.

She started working from home when the company she is working for found that the amount of work required was not sufficient to justify the presence of the accountant at the office. By now the amount of work has grown but the current working arrangements suit Ms Pildre. As the salary paid by her main employer is small, she is able to earn extra money by offering accounting services to other companies also. This way of working is ideal for her as an accountant.

Ms Pildre says that problems can occur while working from home if one is not sufficiently skilled in using the computer and the Internet. As this way of working has developed into a routine for her, she does not have any problems with self-discipline. She has to buy everything necessary for her work herself but the costs are partly compensated by the companies that are her clients. Occasionally she has felt that her main employer treats her as if she were self-employed. The question whether and to what extent the employer should support her in purchasing what she needs for her work remains unresolved.

Ms Pildre's attitude can otherwise be best summarised by saying that one has to identify one's weaknesses and then work to grow in these areas. In her opinion the management style of companies using long-distance workers/those working from home should be unequivocal – a determined form of the reporting process and meeting deadlines are maybe the main things to start from.

### **Overview of Benefits - Managers (employers)**

According to the survey by Ariko Marketing (2002), the major contributing factors to the implementation of teleworking included; (1) uneven distribution of workload, (2) company's location, and (3) cost savings. The employers stated that the main drivers for using telework were a need for greater flexibility in staffing and reducing costs.

A variety of different aspects concerning teleworking were pointed out, such as:

Geographical aspect:

- an employer is able to provide services closer to clients

Flexible hours:

- employers and employees are able to be more flexible in planning work time

Cost savings:

- reduced travel and office space costs

Social aspect:

- telework can enable access to work for people with disabilities

Benefits for employers:

- reduced premises costs (savings on office space)
- reduced labour costs (including travel costs)
- flexible work arrangement
- greater employee mobility (clients have better access to services)
- increased productivity and efficiency
- improved work quality
- more efficient use of labour

Data shows that a major benefit for managers and their organisations is that, whilst teleworking reduces absenteeism by around 70% in the UK, it also makes a major contribution in terms of staff retention. For example 98% of BT's female employees return to work after maternity leave which is a considerably higher level of return than that of the UK as a whole, which is 72%, and this is because some of them say that they will not be able to undertake the job if they could not telework (Department for Transport, 2005).

A further example of benefits to managers and their organisations is the ability to provide teleworking as an incentive to recruit and retain staff from their current labour source, such as, graduates and people who would otherwise retire and are happy to be recruited on a part-time "semi-retired" basis as teleworkers (NACT, 1999).

## Overview of Benefits - Teleworkers (employees)

In the survey by Ariko Marketing (2002), a variety of different aspects concerning teleworking were pointed out.

Benefits for employees:

- better balance between work and family life
- reduced travel costs
- opportunity to work without relocating
- relaxed work environment

Findings from the survey by Mitel Networks, the UK's leading business Communications Company, revealed that 33% of office workers who have worked from home on occasion find it much more productive than working in the office. As many as 45% of office workers are attracted to working from home because they would spend less money on transport, (Mitel Networks, 2001).

Over 40% of UK teleworkers save 6-10 hours per week in their commuting times, whilst 10% saved over 16 hours per week.

Around 65% of teleworkers said they had higher productivity and 60% said work quality had improved.

In most cases, teleworking encourages staff to develop important skills such as time management and acting autonomously.

In Germany, a report showed that 94% of BMW teleworkers increased job satisfaction because of teleworking and 90% said the taking up and implementation of new ideas had improved, and 69% reported a reduction in fatigue.

Around 90% of UK teleworkers report enjoying a better quality of life and having a work-life balance despite working longer hours. Teleworkers find work more rewarding as they are able to concentrate on completing tasks to a higher than average standard.

Over 65% of BT workers say teleworking had boosted their personal incomes. In most cases, teleworking has a powerful positive effect on personal relationships especially between adult partners.

Current data shows that more than 50% of UK teleworkers say teleworking has had a positive effect on their health.

Around 40% of UK teleworkers say less driving (to and from work) has been the biggest positive impact on their health. Other causes of improved health are less work and personal stress, more domestic harmony, more exercise and a better diet.

Research demonstrates that teleworkers can be up to 40% more productive than workers located in traditional office environments. Nevertheless, many workers and businesses are still reluctant to utilise these arrangements.

Telework offers the potential to remove the traditional constraints of location and time; create possibilities for new innovative working arrangements; satisfy changing expectations of many younger workers seeking increasingly flexible lifestyles; and facilitate the Government's Welfare to work policies - especially among groups that find it difficult to participate in the traditional workforce such as people with disabilities, mature workers and workers in rural and regional areas (ATAC 2006). The convergence of computing and telecommunications technologies is transforming the environment within which the business occurs and added value is created. The trends include the establishment of smaller business entities with more flexible and decentralised structures.

Larger organisations, by adopting formal teleworking strategies, can also use the new communications networks and technologies to achieve competitive advantage in several ways such as through asset utilisation, e.g. via 'hot-desking', which permits a building to accommodate significantly more staff than its normal capacity.

Access to new skills which allow faster market entry and acceleration of the introductory phases for new goods and services, in addition to accessing difficult or closed markets, utilising time advantages as a competitive edge, including shortened product development, distribution and administrative time strategies, leads to increased return on capital, greater speed of delivery, decreased waiting time and dramatic increases in quality and productivity, (NACT, 1999).

#### **Case Study 4 - Aura Koivisto**

Aura Koivisto is from Finland, Helsinki. She has been living and working as a freelance journalist in Vormsi for six years. She decided in favour of teleworking because she loves nature, animals and living in the country. Her work is mostly sent to the Finnish press.

For Aura Koivisto, her chosen way of working has the advantage of having a flexible schedule – of course within the constraints of the deadline set by the employer. Koivisto works 5 to 6 days a week – more in the winter, less in the summer. At the same time, her working hours are not as long as they would be if she were based in an office. Aura Koivisto emails her contributions to the publications. One has to be responsible and able to meet deadlines to work in such a way. The work has to be of high quality so that the employer would know what to expect. An efficient exchange of

information and communication between the employer and employee are also important for Ms Koivisto.

In a way, Aura Koivisto made a decision to work from home when she was a child. Living in the country has seemed exciting to her all her life but it is hard to find work in rural areas. She claims to have few skills but writing as something she can do turned out to be useful in finding work and so she has been a freelance writer all her working life. In addition to that long-distance work has given her the opportunity to choose where she lives. She is happy with the way things are right now as she has actually been able to combine her job with her hobby. Being a person who enjoys being alone and acting independently, she would find working in a team stressful.

Ms Koivisto sees no major problems with her working arrangements. She is in need of a good library but at the same time she says that the Internet is a great help. Living in a place of great natural beauty on the island of Vormsi, she has many visitors in the summer who are sometimes unable to understand her routine. Freelance work is always complicated because the future may seem uncertain: you have to take into consideration what kind of work is required and negotiations over payments can also be complicated. Vacation time remains indeterminate because vacations that last too long can mean that somebody is found to replace you – there is no shortage of freelance writers. Aura Koivisto, however, is definitely not somebody who worries and she does not spend too much time thinking about the future. Every job has its problems and Ms Koivisto says she does not want to complain much.

## **6- TECHNOLOGY USED AND TECHNOLOGY AVAILABLE**

Broadband, high speed internet or network connection makes teleworking a realistic option for a wide range of people. With a high speed connection it is possible to transfer large files, including images, audio or video, quickly over the internet. Broadband connectivity also makes it possible to run real time interactive applications such as video conferencing to keep in touch with clients and colleagues no matter where the individual is working. A recent survey published in the Australian Personal Computer magazine shows that teleworking is one of the leading reasons why individuals get broadband connections.

Broadband can be provided through a range of technology. Connections can be through existing phone infrastructure with a form of Digital Subscriber Line technology (usually ADSL), through the cable network which is usually used to deliver pay TV, through wireless solutions, private

company networks or via satellite NOIE (2003). More than half of the adults in the UK now have broadband at home, according to a new report by the telecoms regulator. Competition has helped to push down prices by as much as 75% over the last few years.

At the end of 2006, 50% of UK adults had broadband in contrast to 39% in 2005. In 2006, there were 13 million homes and SMEs with access to broadband compared with just 330,000 in 2001 (Barriaux, 2007).

Apple and TANDBERG partnered with Telework Exchange in the United States to demonstrate next-generation telework technology in action. Telework exchange, a public-private partnership focused on eliminating telework gridlock, announced that sessions from the June 15th town hall meeting are available as a Web podcast online at [www.teleworkexchange.com](http://www.teleworkexchange.com). Visitors on the Telework Exchange website can download the conference programming free of charge and watch when convenient.

“Our goal is to empower dialogue and cross-pollination of best practices – to break the gridlock in telework,” said Stephen W.T. O’Keeffe, Executive Director, Telework Exchange. “Video and importantly on-demand narrowcast technology such as podcasting allows agencies to embrace new business and communicate models without breaking the bank. Internet television channels afford a host of new opportunities for federal government both within and beyond telework.”

TANDBERG, a leading global provider of visual communication products and services, captured the video and audio from the Town Hall Meeting via the TANDBERG video system and the TANDBERG content Server (TCS). The meeting was then streamed via Apple’s video podcast making it widely available to anyone, anywhere, anytime. The TCS converts any video system into a broadcast studio for streaming and archiving meetings and presentations, allowing agencies to extend the reach of their message.

“Bringing interactive and on demand video into the homes and offices of teleworkers strengthens a teleworker’s ability to communicate,” said Joel Brunson, President, TANDBERG. “The latest technology solutions allow teleworkers to interact with co-workers from anywhere – and still have a face-to-face conversation.” (Olsen, 2006).

Teleworking and Local Government by Ursula Huws (2006) highlights that there are numerous areas where ICT has a big impact and these include: Costs and possible savings, IT infrastructure, management and training issues, employee welfare and other personnel issues, productivity, travel reduction and environmental impacts, economic development concerns and community benefits.



This study also looks at the growing phenomenon of “teleworking” in its widest sense – i.e. working at a distance using computers and telephony.

## **7- INTERNATIONAL EXAMPLES OF GOOD PRACTICE AND POLICIES Australia, Canada, Ireland & USA**

### **AUSTRALIA**

Australians have a reputation for enthusiastically embracing technology. Over one-third (34%) of Australian businesses have embraced teleworking, reporting that they had employees that teleworked. Positively in terms of business performance, SMEs that had teleworking employees reported significantly higher levels of confidence than those that did not embrace teleworking. Apart from business confidence, teleworking businesses also performed higher in other performance indicators, most notably sales and profitability, (Sensis, 2005).

Recent figures about teleworking in Australia come from the Australian Bureau of Statistics (ABS). In the three months to October 2001, an estimated 244,700 people, or 8%, of those employed in NSW (New South Wales) teleworked.

The Australian Teleworking Advisory Committee (2006) reports that telework can facilitate greater workforce participation, consistent with the Government’s Welfare to Work policies, especially among groups that find it difficult to participate in the traditional office-based workplace, such as people with disabilities and carers.

According to the Federal Department of Employment and Workplace Relations, a growing number of Australian organisations provide teleworking arrangements for employees. These include Alcoa, American Express, AMP, CSIRO, Esso, Lend Lease, National Australia Bank, Queensland Rail, Rothmans Australia, Sydney Water, Telstra, University of Western Australia and Westpac, to name just a few (NOIE 2003).

The major theme to emerge from the Australian Teleworking Advisory Committee (2006) considerations is that, as a flexible working arrangement, telework has great potential to assist communities, government, employers and employees and meet a number of economic, social and personal goals. Where telework is enabled by appropriate information technology and sensible work practices, it can allow employers and employees to work without the traditional constraints of location and time and can support new and innovative workplace arrangements.

Telework also addresses and contributes to the broader social and economic goals identified by the Australian Government as areas of policy priority. For example, evidence suggests that it:

- Can lead to productivity gains at a firm and macro-economic level.
- Can play an important role in strategies to address the ageing workforce and skill shortages in certain industries, as well as the economic revitalisation of rural and regional areas.
- Can facilitate greater workforce participation especially among groups that would not otherwise engage in traditional working practices.

## CANADA

Working from home and away from the conventional office environment has become increasingly common in Canada. A 1995 statistics Canada survey found that one million paid employees – almost one in ten – did some work at home, including 200,000 people who did most or all their work at home. These figures represented a 40-50% increase from an identical 1991 survey. The Canadian statistics also showed a continued growth in home-based work and telework. A diverse combination of factors is fuelling this growth in telework. Workers with demanding work and family responsibilities are seeking more flexible work arrangements. Employers are using telework to reduce overhead costs, increase productivity, and attract and retain highly-skilled workers who desire flexible work arrangements. Advances in computer and telecommunications technologies are reducing the need for workers to be located in central offices.

According to Canadian statistics, 2.3 million Canadians aged 15 to 64 reported some level of disability in the 1991 Health and Activity Limitation Survey. Almost one in ten employed Canadians – more than one million – are persons with disabilities (CCDS, 2002).

The Canadian Telework Association (2006) says telework can save millions of dollars in real estate costs. Space can be rationalised so organisations save one office for every three teleworkers. A medium-sized organisation with 100 teleworkers can recoup about \$200,000 each year. With, 1,000 teleworkers, the saving might reach \$2 million per year.

At computer giant IBM, about 25% of the company's 320,000 workers worldwide telework from home offices, saving the company around one billion dollars in real estate costs. The other savings – in parking, lighting and air-conditioning – start small but accumulate. Absenteeism can be reduced, morale improved and service enhanced because staff members save commuting time. They are 'at work' earlier, remain later or work outside hours when circumstances demand (NOIE 2003).



As for the management style adopted by the organisations and managers implementing teleworking, not enough is known if their management practices have moved from micro management to output focus, as a result of having adopted this innovative working practice. If this has been the case, it will be useful to identify the process of transition from micro management to output focus.

## IRELAND

The main trigger in Ireland when telework was introduced consciously on a large scale was the regional and peripheral challenge facing the country given its under-population and its island location on the West Coast of Europe. The Department of Public Enterprise set up a Teleworking Group which reported in March 2000 and set out a 15 point plan for the implementation of teleworking in the department. The most significant trigger for telework in recent years has been the dramatic deterioration in urban quality of life, caused by unrealistically high house prices combined with traffic congestion that is causing serious stress (Luke & Drisceoil, 2005).

The Quarterly National Household Survey undertaken by the Central Statistics Office in the 3<sup>rd</sup> quarter of 2002 contained a module on teleworking. This survey confirms many of the trends that have been noted in previous research:

- Two thirds of all teleworkers are male.
- More than 70% of teleworkers have a third level qualification compared with only just 40% of the non-agricultural workforce in general.
- Nearly 40% of all Irish teleworkers reside in the Dublin region. Both Dublin and the Mid-East regions have the highest levels of teleworkers at almost 3% of their working population. This is probably accounted for – in part, – at least – by the fact that telecommunications and the general infrastructure is better in this area. In addition, a significant proportion of teleworkers in the Dublin region are corporate employees. Both the Midland and Mid-west regions have the lowest level of teleworkers, at just over 1%.
- Teleworkers are aged between 25 and 54. In the case of female teleworkers, those who are part of a couple with at least one child under 5 years of age, are most likely to be teleworking (3.% of the workforce in this category, compared to the average of 2% female teleworkers in the overall workforce).

- Over 40% of teleworkers work in the financial and other services sector. Nearly 10% of all males and 4% of all females in this sector telework to some extent.
- Teleworkers work longer hours. The average working week for teleworkers was 43.5 hours, in contrast to the 37.0 hours average for non-agricultural workers in general.

The eWork survey undertaken by MRBI in October 2002 on behalf of Enterprise Ireland's eWork Business Awareness Campaign was the third annual survey of its kind. The key findings are as follows:

- Between 2000 and 2002, the proportion of Irish businesses with one or more employees eWorking has been maintained at 10%. Although the 2002 figures show a decline from the high of 12% recorded in 2001, maintaining the 2000 levels can be viewed as a positive development in view of the recent slowdown in the Irish economy
- The number of employees in those companies using eWork increased from 4.5 employees in 2000 to an average of 5 employees in 2002. This positive development is tempered somewhat by the result of the 2001 survey, recording a high of 6 employees
- 37% of businesses have increased their number of eWorkers since 2000, 58% have remained at the same level, and only 3% have reduced their number
- 92% of businesses rated their experience with eWorking as 'very or fairly' successful
- Only 22% of eWorking business have a formal eWorking policy, and only 20% of eWork managers and 30% of eWorkers have had training provided. This is relatively unchanged from 2001
- A 'typical' eWorking company is located in Dublin (54%) and has more than 11 employees (67%)
- A typical eWorker is a male, full time employee with a third level qualification who eWorks part-time

Jim McGovern is Sales Manager of 3-Com Ireland, which specialises in supplying network solutions. He uses teleworking to be in touch with his customers as much as possible. Starting from home he logs in to the office at about 8 am and spends a couple of hours dealing with communications and administrative tasks. Then he heads off to meet customers without the accompaniment of Dublin's rush hour traffic. McGovern only keeps a "footprint" at the 3-com plant, working mainly from home using:

- ISDN line (Integrated Services Digital Network – services that allow sharing of multiple devices on a single line)

- Telephone
- Fax
- Computer access to online services

Jim has been teleworking for over 6 years and spends 85% of his time away from the office, along with an estimated 90% of his colleagues in 3-Com's sales office. He believes that being a teleworker has never been easier due to technological advances, like E-mail and ISDN but warns that teleworking can also be disorienting and isolating without human interaction, leading to drops in standards due to a lack of stimulation. Self discipline is vital for teleworkers (RNECT, 1999).

## USA

By 2008, 41 million corporate employees globally will spend at least one day a week teleworking, and 100 million will work from home at least one day a month. The highest proportion of these will be U.S. workers, (Jones, 2005).

Organisations involved in telework report major productivity improvements, based on the adage 'a happy worker is a productive worker'. Teleworkers often do more in less time. American Express teleworkers in the United States, for example, produce 43% more business than their colleagues who work in an office (NOIE 2003).

Telework is growing at a rapid pace of at least 20% per year in the United States. As of January 2001, about 10% of the US workforce has teleworked at least one or more days per month. According to CyberDialogue, an international internet research firm, almost 20 million individuals engage in telework arrangements, working one or two days per week at home. Over 80% of current teleworkers work 1-3 days per week at a remote site, (NIH, 2001).

A 2005 study by ITAC estimated that 45.1 million Americans telework from home, up from 44.4 million in 2004 (ITAC, 2005). Included in the 2005 number are nearly 10 million salaried employees who telework at least one day per month, an increase from 7.6 million in 2004. Facilitating this trend is Public Law 106-346 in the United States of America, which requires federal agencies to provide the opportunity to telework, at least one day per week, to all eligible employees. The bill was approved in Washington to penalise those federal agencies not giving all eligible employees the option to telework, (GSA, 2006).

The state of California telework program case illustrates the development of the first planned, large scale telework program in the public sector.

Beginning with a 1987 pilot project involving more than 200 teleworkers and their managers, and 20 different departments of state government, the program has expanded so that there are now at least 3,200 official and at least 9,000 unofficial teleworkers, from more than 150 departments of state government.

California was the first state government to initiate a telecommuting project and expand it thereafter. The primary motivation for the project was the need to reduce the demand for office space in California's capital, Sacramento and in other California cities.

Another motivation was the pressure for energy conservation and reductions in the environmental damage caused by automobiles. The project began with a planning study in 1984 that enlisted the participation of 20 different state agencies. The study produced a project plan that envisioned about 250 state employees who would telecommute (the form of teleworking that focuses on reducing or eliminating daily trips to and from a central workplace).

The project covered a variety of different types of workers, in addition to the variety of work situations provided by the 14 state agencies that participated throughout. Most telecommuters considered themselves to be professionals, with jobs ranging from accountants to researchers and including administrative law judges, lawyers, policy analysts and real estate appraisers. Secretaries and clerical workers constituted 3% of the telecommuters, those who were primary managers formed another 3%, with 18% considering themselves to be both managers and professionals. Because of the low levels of unemployment in California, there is an increasing interest in telework as an answer to work/family/life issues and the need for improved trust and loyalty between employers and employees. Total quality management teams are using the telework option to demonstrate how telework can be integrated with an agency's mission (e.g. energy conservation, transportation management, air quality improvement, performance measurements etc) (Fleming, 2000).

Furthermore, Joe Roitz, AT&T's telework director and HR incident manager, said AT&T is saving \$30 million per year in hard dollars from reduced footprint and operations cost and is netting an additional \$150 million in productivity gains from its telework program, (Bernard, 2005).

## **8- SUSTAINABILITY AND WIDER ECONOMIC IMPACT**

Given the multi-dimensions of Teleworking in the figure 8 below, at present there is a very active interest in exploring its scope at UK/EU and global levels.

## CROSS CUTTING THEMES

Flexible Work Patterns	Economic Development
Work Life balance	Planning, Land Use & Development Control
Education & Skills	Housing
e-Work / e-Inclusion	Sustainability & Growth of Communities
Equal Access to Opportunity	Transport Policy & Traffic Management
Economic Inclusion	Environmental Impact

Figure 8

Telework increases access to information for remote communities, creates jobs in regional areas, enhances opportunities for the self-employed, allows people to find a better work-life balance and provides new hope for those with disabilities. The benefits of teleworking are evident on a micro and macro level, for governments, businesses, institutions, communities and individuals.

For many businesses, it can simply enable smarter – and more profitable – ways to structure their operations. With people teleworking it is possible for even a small company to have representatives in distant locations serving local markets, without enormous office overheads, but with access to all the same information and instant communication necessary to be effective, (NOIE, 2003).

There are environmental and economic benefits of teleworking, given the right conditions. Telework could:

- Cut private car traffic by 3% in the short term, with a potential for greater savings in the future
- Reduce traffic congestion at peak times
- Reduce the need for new road building
- Improve the efficiency of office space
- Reduce the total energy use of companies
- Help to reduce development pressure in London and the South East

The environmental potential is not being fully realised. Some pioneering companies such as BAA, BT and Sun Microsystems are promoting it through either company policy or their products. But there is no systematic approach from government to encouraging telework.

- The UK government's sustainable development strategy was being reviewed in 2004/5. In the original 1999 strategy there was very little reference to the use of ICT to reduce environmental impacts and promote social and sustainable economic development.
- The 2004 transport white paper promises investment in new transport infrastructure, including new roads, and discusses the possibility of traffic suppressing measures such as congestion charging and motorway tolls. But there is no promise of investment to reduce the need to travel, through the applications of ICT such as telework.
- Recent new building regulations from the office of the Deputy Prime Minister aim to reduce the energy consumption of new buildings. But the regulations do not require the incorporation of ICT infrastructure that would help change householders' behaviour and facilitate telework.
- The Department of Trade and Industry (DTI) recently produced guidelines on telework for companies and employees. The guidelines address issues such as health and safety, and personal support and security in the home for teleworkers, but do not address the environmental role that telework can play.

The Global Climate Change Accord was signed by 165 nations at the Conference on Environment and Development in Rio de Janeiro in 1992. In the treaty, nations agreed that a build-up of heat-trapping gases in the atmosphere (especially carbon dioxide) was helping warm the climate of the planet. The Rio Accord to reduce car emissions for environmental benefits has helped to reinforce some interest in the teleworking dimension (Gillespie et al, 1995).

Telework on its own is not going to save the world but it is an example of the sort of behaviour and work practice that Governments could be encouraging. If companies are given the right incentives, if Governments provide guidelines to encourage telework and present it as a strategic management tool for empowerment and innovation, telework could make a significant contribution to local and regional sustainable development.

Telework can reduce the burden on our transport infrastructure, reduce congestion and contribute to national carbon reduction targets. According to the Office of National Statistics, greenhouse gas emissions from



transport rose by 47% between 1997 and 2002. Emissions from private cars are up 6% since 2000, and road transport now accounts for 18% of the UK's greenhouse gas emissions, up from 14% in 1990. Growth in transport has traditionally been closely connected to growth in Gross Domestic Product (GDP). Increasing use of ICT stimulates GDP growth and so indirectly ICT is associated with transport growth. However, ICT applications such as teleworking can be used to move things in the opposite direction.

## Commuting

There is a growing body of convincing evidence to show that, when companies encourage their staff to work from home, work-related travel is reduced. Employees make fewer journeys to work and, although the car is not always sitting idle in the garage, teleworkers do not make enough extra daytime journeys to cancel out the mileage savings.

- Simens Nixdorf in Sweden reports that teleworkers save 19km of car travel a day when working at home – 74,600km/year for the company as a whole (Forseback, 2000).
- Employees at Sun Microsystems save two hours of commuting time per week.
- Telia in Sweden reports that home-based teleworkers save on average 2,500 km per vehicle a year (Forseback, 2000).
- Teleworkers at BAA saved 98 km on average a week.
- Teleworkers at BT on average travel by car 405 km less each a week. This includes so-called 'rebound effects' in which teleworkers make extra trips from home that they would not have made if they were in the office (Hopkinson, 2002).

In the UK, roughly 68% of jobs are teleworkable, according to Electronic Commerce and Telework Trends (ECaTT), and commuting accounts for approximately 20% of total passenger travel. Therefore, if everyone could telework every day of the week, passenger travel in the UK could be cut by around 13.6%, making the case for teleworking – which also means making the environmental case for teleworking –and therefore make a strategic significant contribution to sustainable development.

According to the two-year SusTel (Sustainable Teleworking) study, the largest ever European study into the impact of teleworking reveals a list of major benefits to employers and staff such as, each BT teleworker questioned for the survey saves 253 miles per week by not commuting to and from work, but they drive an additional 60 miles in errands during the week which they would not have done had they been commuting.

## Congestion

Although local air pollution has declined with the advent of catalytic converters and cleaner fuels, improvements in fuel efficiency for individual vehicles has been balanced out by growth in the volume of traffic (Department of Transport, 2002). A proportion of major urban roads (10%) in the UK broke pollution standards for nitrogen dioxide in 2005. Almost two thirds of these were in London (NETCEN, 2003). There is considerable evidence to suggest that teleworking could help reduce congestion at peak times by spreading the times of travel more evenly throughout the day. Teleworking using mobile networking devices could encourage a general shift away from private car travel.

The UK Government recently published a white paper entitled 'The Future of Transport: a network for 2030'. It sets out the Government's long term vision for managing and meeting transport demands. The strategy anticipates significant investment in rail, bus networks, aviation and, 'where it is needed', new capacity in the road network. The study also reviews strategies to suppress demand through road pricing measures such as congestion charges. However, there is no promise of investment in trying to reduce the need to travel. Teleworking has the potential to reduce private passenger travel demand and an enlightened and integrated transport policy should take into account the trend for teleworking, along with other ICT- related transport substitution, into the strategy. Teleworking will not, on its own, provide the solution to our transport problem and its environmental impacts. However, encouraging telework could make an important contribution to reducing demand, as well as having other benefits for companies, communities and quality of life (Goodman, J, Alakeson, V. & Jorgensen, B., 2004).

Companies that encourage teleworking have already cut down the amount of office space they use, with environmental as well as financial savings. A well planned teleworking approach and use of space could bring economy-wide environmental benefits.

Encouraging staff to telework some of the time, and implementing a hotdesking policy, can help increase the efficiency of buildings.

- AT&T estimates a US\$25 million per year saving in real estate through its virtual office programme (Allenby, 2001).
- Sun Microsystems has reduced overall office space needs by 25% in the past four years through its flexible working programme.
- Siemens created a flexible office and halved the amount of office space needed (Forseback, 2000).
- Telework has made a significant contribution to BT's 50% reduction in floor space since the mid 1990s.

- The Department of Transport in the Netherlands estimates that if 12,000 of its employees worked from home, it could save 15% on the cost of premises (Forseback, 2000).
- BAA estimates that its teleworking scheme has contributed to the release of an entire building at Heathrow Airport, with economic as well as environmental savings (Goodman, J, Alakeson, V & Jorgensen, B., 2004).

## **Relocation**

Teleworking gives companies and public sector employers the opportunity to relocate staff away from main offices and so reduce environmental pressure on their principal office locations.

- BT has used its flexible working programme as an opportunity to improve its environmental performance by moving employees away from congested cities. As part of this, it has moved away from a team structure based around particular offices and reorganised itself into national teams, allowing individuals to work in new, state of the art offices closer to home.
- Mobile telecoms company Orange is also looking to improve its environmental performance by changing location, but it had taken an entirely different approach. It has moved offices into the centre of Bristol to increase car-sharing and the use of public transport. The relocation together with a green travel plan has been successful in reducing single car use (Goodman, J, Alakeson, V & Jorgensen, B., 2004).

## **9- e-DIMENSION POLICY AND KNOWLEDGE BASED ECONOMY**

### **EU Dimension – Lisbon Strategy**

Research by Cranfield School of Management's Human Resource Research Centre, through the study of 8,000 companies across 32 countries shows that just 48% of the UK's companies offer flextime working conditions to their employees, compared to 94% in Sweden, 92% in Finland and 90% in Germany (Tyson, 2006).

According to the European Commission's Report (1998), The European Commission's first interest in telework dates from 1989. Concerns were raised in the context of the Communication Technology research programme RACE, when assessing risks of exclusion and opportunities for

decentralisation arising from the economic impact of advanced communications on rural and remote regions. The European Commission picture on teleworking emerged in 1998 and highlighted four main trends in our understanding and use of telework.

Firstly, in Europe as a whole, telework in its several different manifestations is now increasing at an accelerated rate. The 1997 report suggested that something over two million Europeans were teleworking in one form or another; in 1998 they numbered upwards of four million.

Secondly, it is now widely understood that telework methods and practices cannot be understood and applied successfully in isolation. Telework is increasingly seen in the context of, and applied in conjunction with, other key information society techniques – notably teletrade (using networks in the context of marketing and of customer-supplier relationships) and telecooperation (people and organisations using electronic networking methods to develop and enhance relationships).

Thirdly, the nature and role of telework vary significantly in different places and contexts. Different aspects of teleworking assume importance in rural as opposed to urban settings; in areas of high and low employment; in areas of high and low intensity of ICT penetration and use; in large bureaucratic organisations and in small, rapidly evolving ones. There are many common lessons to be learned and issues to be addressed, but also much knowledge and understanding to be gained from awareness and analysis of differences between countries and regions as well as between organisations.

Fourthly, telework is increasing; some significant barriers to progress remain, demanding attention by legislators, company executives and the social partners. Notably, the benefits of teleworking are readily understood and obtained in enterprises that are effective users of ICTs, have confident managers and employees, and operate where local administrations and unions have a positive, proactive stance to innovation and change. Where some or all of these characteristics are missing, telework along with other new working methods is either low on the agenda or practised informally and without appropriate organisational support.

An extraordinary European Council meeting was held in Lisbon on 23–24 March 2000 in order to discuss how to harness the power of the emerging "knowledge economy" to create employment growth. The conclusions of this Council focus on a 10-year strategy for the European economy, including a framework for concrete targets in employment and training. It was also agreed that from now on, special European Councils will be held

each spring in order to debate economic and social issues. In the context of the European employment strategy, the European council invited the social partners to negotiate agreements modernising the organisation of work, including flexible working arrangements, with the aim of making undertakings productive and competitive and achieving the necessary balance between flexibility and security.

The European Commission, in its second stage consultation of social partners on modernising and improving employment relations, invited the social partners to start negotiations on telework on the 20<sup>th</sup> of September, 2001 and this has now been approved (CEC, 2006). Telework covers a wide and fast evolving spectrum of circumstances and practices. For that reason, social partners have chosen a definition of telework that covers various forms of regular telework. The social partners see telework both as a way for companies and public service organisations to modernise work organisation, and as a way for workers to reconcile work and social life and to have greater autonomy in the accomplishment of tasks. If Europe wants to make the most of the information society, it must encourage this new form of work organisation in such a way that flexibility and security go together, the quality of jobs is enhanced and the chances of disabled people in the labour market are increased (CEC, 2001).

## **10- CONCLUSIONS: KEY ISSUES AND FUTURE RESEARCH Country Specific Policy Recommendations and Proposals**

### **Estonia**

- Based on the progress made in the ICT sector, the government should consider adopting decentralisation strategies and policies, which would contribute to a more balanced and sustainable regional development by creating employment opportunities in peripheral and disadvantaged areas. Similar policy initiatives have been proposed in other countries, including Ireland where the government made a decision in 2003 to move a number of civil service offices out of Dublin to other towns throughout the country.
- The government should take the lead in raising awareness on the social, economic and environmental benefits of teleworking by conducting campaigns aimed at employers.
- The decentralisation strategy should be supported by government policy on the establishment of telecentres in rural and peripheral areas. The benefits of telecentres should be acknowledged and

public investments should be directed towards the development of telecentres.

- The government departments and publicly funded organisations should take the initiative to introduce teleworking options into their mainstream working by launching pilot programmes and developing teleworking policies. Teleworking (e-Working) pilot projects in the public sector would set an example for other organisations.
- Develop a nationally recognised teleworking (e-Work) training programme to be targeted at both employees and employers/managers.
- Conduct research and impact evaluation on teleworking (e-Work) programmes and initiatives.

## Wales

### **Social Case:** Equal Opportunities, Empowerment, Communities, Excluded Groups

The evidence shows that teleworking presents vast potential to contribute to:

- Work Life Balance
- Employment creation amongst isolated communities (rural and peripheral)
- Support non-traditional ways of working
- Increase in employment levels of older workers
- Increase in employment levels for disabled

### **Economic/Business Case:** Sustainability, Growth

- Promotes Regional Development and Regeneration
- Contributes to the Lisbon agenda
- Teleworking as a strategic management tool increases productivity and profitability
- Compensates for skill shortages by sourcing staff from a wider span

### **Technological Case:** Innovation, Accessibility, Disaster Management

- Lower cost of access to internet and broadband
- Technology drives innovation and competitiveness
- Access to global market
- 24/7, 365



- Provides business continuity in case of natural disasters and terrorism

### **Environmental Case:** Sustainability, Carbon Print.

Existing research points to the fact that there are environmental benefits to the practice of teleworking both within urban and rural environments.

- Reduce traffic congestion at peak times
- Cut commuting traffic
- Reduce energy demand by organisations

### **Future Research**

- Comparative study of teleworkers with disabilities and those without both working from home
- Investigate Technology-Assisted Employment Issues
- Investigate the “push-pull” factor in teleworking
- Investigate the spatial/temporal patterns of teleworking
- Document existing role models of informal and formal good practice

### **Policy Recommendations**

- Employer incentives to adopt teleworking practices at a regional level
- Identify Teleworking Champions to raise awareness of teleworking practices (public, private, voluntary sectors)
- Provide incentives and support for Teleworking/Homeworking clusters
- Encourage & Support Technology Assisted Employment Initiatives

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## **APPENDIX 1**

### **HR / MANAGEMENT INTERVIEW FRAMEWORK**



**Interviewee**  
**Company**  
**Location**

**Title**  
**Date**

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### **Question 1**

The first question is do you have any general definitions for what you consider as teleworking and homeworking? [Do you have examples of each?]

### **Question 2**

How would you define teleworking and homeworking in the context of your organisation?  
[If any different from your general definitions]

### **Question 3**

In general terms what do you consider are the advantages of teleworking and homeworking? [Do you have some examples of each?]

- 1.
- 2.
- 3.

### **Question 4**

In general terms what do you consider are the disadvantages of teleworking and homeworking? [Do you have some examples of each?]

- 1.
- 2.
- 3.

### **Question 5**

To what extent is teleworking and homeworking utilised in your organisation?

### **Question 6**

How long has the organisation been using teleworking and homeworking?

### **Question 7**

What were/are the main reasons and/or drivers for implementing teleworking and homeworking in your organisation?

[EU and national government legislation?]

[Work/life balance?]

[Staff drivers e.g. demand it, needed to attract right talent]

### **Question 8**

What do you think are the trends with teleworking and homeworking, both in your organisation and in general?

### Question 9

What do you see as the challenges faced by your organisation regarding teleworking and homeworking both now and in the future?

Now

- 1.
- 2.
- 3.

Future

- 1.
- 2.
- 3.

### Question 10

Do you have any strategies in place to deal with these challenges?

Now

- 1.
- 2.
- 3.

Future

- 1.
- 2.
- 3.

### Question 11A

Do you perceive that managers have any difficulties in coping with the introduction of teleworking and homeworking in your organisation?

### Question 11B

If so, what strategies do you have in place to deal with them?

[Training?]

- 1.
- 2.
- 3.

### Question 12

What competencies do you think managers need to manage teleworking and homeworking employees?

- 1.
- 2.
- 3.

### Question 13

What management process do you think need to be in place to manage teleworking and homeworking employees?

### Question 14

What kinds of technology do you use to facilitate teleworking and homeworking?

**Any other comments/questions:**

**Thank you for participating**

## TELEWORKER INTERVIEW FRAMEWORK

**Interviewee**  
**Company**  
**Location**

**Title**  
**Date**

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### **Question 1**

The first question is do you have any general definitions for what you consider as teleworking and homeworking? [Do you have examples of each?]

### **Question 2**

How would you define teleworking and homeworking in the context of your organisation?  
[If any different from your general definitions]

### **Question 3**

In general terms what do you consider are the advantages of teleworking and homeworking? [Do you have some examples of each?]

- 1.
- 2.
- 3.

### **Question 4**

In general terms what do you consider are the disadvantages of teleworking and homeworking? [Do you have some examples of each?]

- 1.
- 2.
- 3.

### **Question 5**

How many days of the week do you spend teleworking and homeworking in your organisation?

### **Question 6**

How long has the organisation been using teleworking/homeworking?

### **Question 7**

What were/are the main reasons and/or drivers for implementing teleworking and homeworking in your organisation?

[EU and national government legislation?]

[Work/life balance?]

[Staff drivers e.g. demand it, needed to attract right talent]

- 1.
- 2.
- 3.

### **Question 8**

What are your personal reasons for opting for teleworking and homeworking work pattern?

- 1.
- 2.
- 3.

### **Question 9**

What do you think are the practices with teleworking and homeworking, both in your organisation and in general?

## **Question 10**

What do you see as the personal challenges you face as a result of the practice of teleworking and homeworking?

- 1.
- 2.
- 3.

## **Question 11**

Do you have any strategies in place to deal with these challenges?

- 1.
- 2.
- 3.

## **Question 12A**

Do you perceive that managers have any difficulties in coping with the introduction of teleworking and homeworking in your organisation?

## **Question 12B**

If so, what strategies do you have in place to deal with them?

- 1.
- 2.
- 3.

## **Question 13**

What competencies do you think teleworkers and homeworkers need to manage teleworking and homeworking patterns?

- 1.
- 2.
- 3.

## **Question 14**

What management style do you think needs to be in place to manage teleworkers and homeworkers ?

## **Question 15**

What kinds of technology do you use to facilitate teleworking and homeworking?

Any other comments/questions:

**Thank you for your participation**

## **Comparative Tele-working Study**

As a result of a transnational visit in June with Estonia and Wales a comparative study on teleworking has been proposed by the partnership.

The study will describe and compare the similarities and differences of the approaches and models used in each member state. Transnational partners will be better informed of the opportunities (or otherwise) that may be gained from further developing and promoting home working / teleworking in the context of disadvantaged groups and in the general populations.

This means that good practice and knowledge exchange between European member states will inform about the value of a (possibly) under used option for employment or self employment.

This is a new approach to promoting employability and engaging under represented/disadvantaged groups in employment or self employment. The study aims to highlight opportunities of entry points to employment and may form a benchmark for a model to be designed, tested and evaluated in any of the participating member states.

A member of the project team in Estonia will be seconded to the teleworking project and will work with partners in Wales and Ireland responsible for developing the research.

The partner responsible for coordinating the research from Equinex will be Velvet Projects [marilia@velvetprojects.eu](mailto:marilia@velvetprojects.eu) , a Cardiff based research and consultancy enterprise.

For further information about this and other Equinex Project work contact Margaret Davies, Equinex. [Margaret.davies2@newport.ac.uk](mailto:Margaret.davies2@newport.ac.uk)



## APPENDIX 2 – Wales/UK and Estonia Questionnaire Responses

### Wales/UK - TELEWORKER INTERVIEW RESPONSES

Interviewee	Teleworkers	Title	CD/ SBDO / EHO / CF	Date
Company	Private/ Ltd+Charity / LA / Private			

Location	Shropshire / North Wales / South Wales / Manchester
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#### Question 1

The first question is do you have any general definitions for what you consider as teleworking and homeworking? [Do you have examples of each?]

**Our case studies definition of teleworking implied the existence of an office (base) from which they operate independently either at their**



own home, a specific location, or even mobile carrying out tasks that would traditionally be carried out in an office environment  
Our sample's experience of teleworking was both part-time and full time. Anywhere with broadband and wireless network.

A further definition provided was the use of the technology involved to transmit and managed work from various locations

As for their Homeworking definition, it inferred that the Home was the base from which they operated either on a nearly full-time, mainly part-time or ad-hoc basis.

### **Question 2**

How would you define teleworking and homeworking in the context of your organisation?

[If any different from your general definitions]

Same as above

### **Question 3**

In general terms what do you consider are the advantages of teleworking and homeworking? [Do you have some examples of each?]

1. Work Life Balance
2. Flexibility - time management (when to work) around other commitments and responsibilities
3. Sense of empowerment (work environment, time) , trustworthiness, increased loyalty to employer . More productive and more time for family

Similar to existing contemporary data on the drivers of teleworking / homeworking the studies' respondents put Work Life Balance as the primary advantage for these workings methods.

A more in-depth study could explore if this is the case independently of the Life Stage of respondents, or if this relates to a particular situational stage in a individuals' life.

### **Question 4**

In general terms what do you consider are the disadvantages of teleworking and homeworking? [Do you have some examples of each?]

1. Isolation and lack of Face –to Face contact with colleagues was identified by all respondents as the top disadvantage. No live forum to discuss issues, no water cooler chat.  
Given the opportunity to drill down on this response it may be useful to find the respondents own ideas to overcome this disadvantage and investigate how other teleworkers / homeworkers approach and manage this topic, as well as find out what strategies have organisations put in place to counter balance this issue.
2. Distractions came next, and these could either be self-induced or externally provided by family and friends, who need to realise that “being at home” doesn’t mean one doesn’t have nothing to do.
3. Overworking – issues of time management, self-management and teleworkers skills development all have a part to play in this issue.

### **Question 5**

How many days of the week do you spend teleworking and homeworking in your organisation?

Two of the respondents do it full time, one does it 2.5 days a week and the other 80% of time.

According to Luke & Drisceoil (2005) types of teleworkers (pg8) all our respondents are primary teleworkers

### **Question 6**

How long has the organisation been using teleworking/homeworking?

Two of the respondents 2y, one 4y and another 10y

### **Question 7**

What were/are the main reasons and/or drivers for implementing teleworking and homeworking in your organisation?

[EU and national government legislation?]

[Work/life balance?]

[Staff drivers e.g. demand it, needed to attract right talent]

1. Work Life Balance
2. Productivity
3. Cheaper (office and travel costs) , smart working

### **Question 8**

What are your personal reasons for opting for teleworking and homeworking work pattern?

1. Creative, Work Life Balance, better time management
2. Flexibility, save time travelling
3. To give more attention to kids and to be available for relatives

### **Question 9**

What do you think are the practices with teleworking and homeworking, both in your organisation and in general?

A system that allows homeworkers to communicate freely and exchange ideas

Overcoming isolation through technology. Flexibility is the key to get the job done

### **Question 10**

What do you see as the personal challenges you face as a result of the practice of teleworking and homeworking?

1. Isolation, meeting the business needs of the organisation, be proactive in interacting with colleagues
2. Agree targets
3. Self-discipline to avoid overworking and bouncing ideas with others, as well as keep in regular touch with the team

### **Question 11**

Do you have any strategies in place to deal with these challenges?

1. Socialise both on and off line, regular meetings, regular contact
2. Good software that allows for good digital collaboration and Time management, is key
3. Locus of responsibility is with the individual

### **Question 12A**

Do you perceive that managers have any difficulties in coping with the introduction of teleworking and homeworking in your organisation?

**For three of the respondents there were no perceive difficulties for their managers, however one of the respondents raised the issues of initial trust and how performance measure outputs has been a successful strategy in overcoming the initial doubts.**

**For one of the other respondents the introduction of the staff diary is likely to have made staff monitoring easier**

### **Question 12B**

If so, what strategies do you have in place to deal with them?

1. Performance measured outputs
2. Together with Training, policies and Support
3. Improved communication

### **Question 13**

What competencies do you think teleworkers and homeworkers need to manage teleworking and homeworking patterns?

1. Good communication
2. Whilst Good software is not a competency is perceived as a key tool, together with the ability to work independently and trust
3. As well as self- discipline and time management

### **Question 14**

What management style do you think needs to be in place to manage teleworkers and homeworkers ?

**Managers need to be sensitive to the needs of teleworkers and their best style of work, exercise trust together with macro-management and be output oriented.**

### **Question 15**

What kinds of technology do you use to facilitate teleworking and homeworking?

Access to Broadband

Laptops & Mac book

Docking station for laptop

PC Screen

Printer / Fax machine

VoIP ( Skype)

Project Management software – Basecamp

E-mail

Any other comments/questions:

**Thank you for your participation**

## **Wales/UK - HR / MANAGEMENT INTERVIEW RESPONSES**

<b>Interviewee</b>	HD/EJ/PH	<b>Title</b>	BDM/D/D
<b>Company</b>	Ltd + Charity/Private/Private	<b>Date</b>	April 2007
<b>Location</b>	Cardiff, Wales/ Shropshire/Manchester		

---

### **Question 1**

**The first question is do you have any general definitions for what you consider as teleworking and homeworking? [Do you have examples of each?]**

**HD**-Teleworking – this needn't be done from home, it could be done from anywhere that it is possible to access the information required to carry out the job – e.g. internet café, wifi zone

Home-working – there are different levels of home-working.

Ad hoc, occasionally working from home to complete a specific task, or the necessity to work from home due to other responsibilities making it difficult to attend the usual place of work e.g. domestic issue, caring issue

Partial, where an employee works part of their contracted hours from home and the remainder from an office base

Full, where an employee is a designated home-worker and does not have a desk at the office of the employer

**EJ**- *I consider the definition of homeworking to be someone who spends part of their working week from home.*

**PH**- Anywhere where there is broadband and wireless network is office

## Question 2

How would you define teleworking and homeworking in the context of your organisation?

[If any different from your general definitions]

**HD-** No different from general definitions

**EJ-** *We are a home based company. As employees of the company, we each operate from our separate home offices.*

**PH-** Telework and homework are the same

## Question 3

**In general terms what do you consider are the advantages of teleworking and homeworking? [Do you have some examples of each?]**

**HD**

1. Less interruptions from colleagues
2. We would have lost valuable staff had we not been able to accommodate home-working
3. Cost savings in not having to maintain an office base for a small number of employees

**EJ**

1. *We are more productive (due to no commute time and no office politics!)*
2. *We reduce overheads by not taking on extra cost of property*
3. *We are happier people, having the freedom and flexibility to work from home*

**PH**

1. Flexibility
2. More productive
3. Time for family

## Question 4

**In general terms what do you consider are the disadvantages of teleworking and homeworking? [Do you have some examples of each?]**

**HD**

1. Employee isolation e.g no camaraderie possible and no-one available to immediately bounce ideas with

**EJ**

1. *Isolation*
2. *Employees feeling they are not progressing their career*



### *3. the need for strong trust between employer and employee*

**PH**

1. No forum to discuss issues
2. No water cooler chat ( office gossip)

#### **Question 5**

To what extent is teleworking and homeworking utilised in your organisation?

**HD**

We have 2 designated home-workers

We have 2 partial home-worker

All staff are able to work from home on an occasional basis with the agreement of their manager

**EJ**

*We are fully home based.*

**PH**

100%

#### **Question 6**

How long has the organisation been using teleworking and homeworking?

**HD**

The organisation has always had a policy whereby staff can work from home with the agreement of their manager.

We have had designated home-workers for the last 4 years.

**EJ**

*Since the business was created in 2003.*

**PH**

**Since January 2006 – 15 months**

#### **Question 7**

What were/are the main reasons and/or drivers for implementing teleworking and homeworking in your organisation?

[EU and national government legislation?]

[Work/life balance?]

[Staff drivers e.g. demand it, needed to attract right talent]

**HD**

As the organisation leading the Work Life Balance agenda in Wales, we must adopt best practice in relation to all initiatives which form the basis of the full Agenda.

The driver for the initial designated home-working post was two fold, our office base moved some 30 miles and the staff member involved requested home-working to reduce commuting time and distance.

Subsequent designated home-working posts have made good business sense i.e costs were reduced by setting up two people at home rather than maintaining an office base for these two posts.

Partial home-working posts have been driven by employee requests

EJ

*For all the reasons note above that represent the upsides of homeworking.*

**PH**

### **Flexible work for Work Life Balance**

To reduce costs (office)

### **Question 8**

HD

What do you think are the trends with teleworking and homeworking, both in your organisation and in general?

One of the trends is that it is increasing, with advances in technology making this more feasible.

Some businesses are using technology as a driver for increasing/introducing teleworking/home-working into their organisation.

This is a mistake, it has to make sense for the business to introduce it and then technology can be used to make it happen.

EJ

*I think that more people are deciding to work from home and this is born out by all the news stories that appear at [www.enterprisenation.com](http://www.enterprisenation.com)*

PH

Company pays for everything (PC, broadband). Currently recruiting and offering telework to new staff. Targets are set: because of the travel schedules of the job and everyone is aware of set targets

### **Question 9**

**What do you see as the challenges faced by your organisation regarding teleworking and homeworking both now and in the future?**

**HD**

Now

1. More requests for designated home-working
2. Presenteeism culture amongst some employees
- 3.

EJ

Now

1. *data protection*

Future

1. Managers skills
- 2.
- 3.

Future

- 1.

2. *taking on new staff*

3.

PH

Now

1. managing staff

2. communication

2.

3.

Future

1. recruiting new staff

2. friendly technology

### Question 10

Do you have any strategies in place to deal with these challenges?

HD

We don't have any strategies in place however, would suggest we consider

Now

1. Accommodation strategy

2. Training

3.

EJ

Now

1. Good IT systems

2. A strong company vision

3.

PH

Now

1. Develop software (in house) improvements

2. Are used to work and make work easier

Future

1. Training

2.

3.

Future

1.

2.

3.

Future

1. Skype / messenger

for better communication

### Question 11A

**Do you perceive that managers have any difficulties in coping with the introduction of teleworking and homeworking in your organisation?**

HD

No, although with expansion I could see this as being a potential issue

EJ

*Not in this organisation but yes, I do believe that managers' attitudes towards homeworking represent a significant barrier to the wider adoption of homeworking. But I think that the more employees demand to work from home, employers will not be able to resist these requests or their employees will just move elsewhere.*

PH

**Yes**

**Question 11B**

If so, what strategies do you have in place to deal with them?

[Training?]

PH

1. Weekly meetings
2. Set targets
3. Resolve issues quickly, in order not to escalate into negative trends

**Question 12**

**What competencies do you think managers need to manage teleworking and homeworking employees?**

HD

1. Ability to communicate effectively
2. To have a task orientated approach/outlook to the post
3. Ability to trust the staff that they are responsible for

EJ

1. Trust
2. Trust
3. Trust in their employees!

And good IT systems/ performance measurement in place

PH

1. Confidence and ability to let go of being a micro manager
2. More flexible and liberal approach
3. No more micro manager approach

**Question 13**

**What management process do you think need to be in place to manage teleworking and homeworking employees?**

HD

1. Agreed ways and levels of communication between employee and manager
2. Clear reporting requirements against objectives

EJ

*It is also important to ensure that homeworkers feel part of a team with a deep understanding of company direction.*

PH

**Recruit people with highly fluid skills, who have the ability to define a problem and address the issues**

#### **Question 14**

**What kinds of technology do you use to facilitate teleworking and homeworking?**

HD

Broadband

Mobile phones

Laptop computers

PDA's

**EJ**

**Two most critical tools are:**

**Basecamp Software**

Skype

**PH**

**Broadband**

Portable PC's

Laptops & Mac books

Wiki - Wikidemia

**Any other comments/questions:**

**Thank you for participating**

### **ESTONIA - TELEWORKER INTERVIEW FRAMEWORK**

Interviewee/Organisation: real estate agent (1), Ministry of the Environment (2), State Nature Conservation Centre (3), freelance journalist (4), Kuressaare Old City School, Tallinn University of Technology (5), web

administrator (6), IT specialist, web designer (7), accountant (8), saleswoman (9)

Location: Hiiumaa (1,2), Saaremaa (5,6,7,8,9), Vormsi (3,4)

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**Do you have any general definitions for what you consider as teleworking and homeworking? [Do you have examples of each?]**

(1) Teleworking is working in a location away from the employer's premises, by using electronic means of communication to deliver work. Homeworking may be work carried out in your own company or working at home on a piece work basis.

(2) Homeworking – work performed at home, whereas the employer's office may be remote or local. Teleworking may refer to the work done from home, but in a location remote from the employer (another county).

(3) I suppose I might be called a teleworker because I carry out my work at home on the island away from my co-workers on the mainland. The necessary communication takes place through email or phone and there are few face-to-face meetings with the employer.

(4) For instance, an employee may occasionally work from home and communicate with colleagues by email or telephone.

(5) Teleworking is a form of work in which work is performed at a location other than the traditional office, involving the use of a computer and Internet. If the company does not have an office, all the employees work from home and meet occasionally to discuss problems or new tasks.

(6) Teleworking is working away from a central office. Homeworking is work done in the home.

(7) Telework is working at a distance from a client and using Internet to do so.

(8) Teleworking is working for an employer who is located in another county or country. Homeworker is anyone who works from home.

(9) Teleworking is working outside the traditional workplace (e.g., home), using telecommunications to keep in touch with the employer.

**How would you define teleworking and homeworking in the context of your organisation?**

**[If any different from your general definitions]**

- (1) These terms are not defined in our organisation.
- (6) IT administrators do telework, but our company does not use homeworking.

**In general terms what do you consider are the advantages of teleworking and homeworking? [Do you have some examples of each?]**

(1) Flexible work time; pleasant work environment; fewer distractions; less stress; lower transport costs (in terms of time and money); opportunity to spend more time with one's family.

(2) Employer benefits: increased recruitment potential; lower overhead. Employee benefits: opportunity to find work without having to relocate.

(3) Opportunity to work from home on the island.

(4) Flexible working hours – more control over working time. I enjoy working on my own and do not miss working in a group or regular communication with colleagues. Most importantly, I can choose the place where I live.

(5) I do not need to be in the office every day. I have control over my working hours.

(6) Telework can be done from anywhere, regardless of location. Homeworking is suitable for people who work with projects.

(7) I have total control over my time as I do not follow a strict work schedule. I feel more motivated to do my work because I am responsible for results.

(8) I became a teleworker 10 years ago to improve my living standard. I have been a homemaker for 11 years. I am very happy with my working arrangements because I do not need to rush to the office in the morning. I am very flexible with my working hours and able to concentrate on my work.



(9) Greater flexibility in planning work; flexible working hours; reduced overhead costs; more efficient use of workforce.

**In general terms what do you consider are the disadvantages of teleworking and homeworking? [Do you have some examples of each?]**

(1) The employer often does not provide the employee with necessary equipment.

The employee himself has to take care of his work environment (e.g., heating, equipment).

Less communication; higher telecommunication costs.

(2) Possible communication problems; weaker sense of involvement with co-workers, lack of social life.

(3) Need for direct, face-to-face communication.

(4) Sometimes I wish I had access to a good library, but of course, the Internet is of great help. Also, I feel that people should be more understanding – often they do not realize that I have a work to do although I do not go to an office.

(5) Occasional communication problems due to power cuts, poor Internet access, etc.

(6) Lack of personal contacts. Homeworking might blur the boundary between work and private life.

(7) No team work or opportunity to exchange ideas and experiences. Professional development is more effective in a team.

(8) Staying away from home; feeling of isolation

(9) Communication problems; less control over working time; lack of motivation and self-discipline

**How many days of the week do you spend teleworking and homeworking in your organisation?**

(1) 1-3 days

(2) 5 days

- (3) Every day
- (4) 6 days a week in winter, 5-6 days a week in summer, but usually my working days are not long.
- (6) A couple of times.
- (7) Every day, sometimes also on weekends
- (8) I do teleworking once a month, the time spent away from home depends on the amount of work. I work from home every day.
- (9) 1-2 days

### **How long has the organisation been using teleworking/homeworking?**

- (1) Approximately 3 years
- (2) For a while
- (3) Approximately 10 years
- (5) Over 10 years
- (6) 2 years
- (8) Over 10 years
- (9) 2 years

### **What were/are the main reasons and/or drivers for implementing teleworking and homeworking in your organisation?**

[EU and national government legislation?]

[Work/life balance?]

[Staff drivers e.g. demand it, needed to attract right talent]

- (1) The type of work – the work is carried out all over Estonia so it does not make sense to bring all the employees to Tallinn.
- (3) Need for a local “office”.
- (5) The employer wished to promote more modern working arrangements. On a personal level, it was an opportunity for additional income. Also, I wanted to keep up with the changes and broaden my skills.
- (6) Better work/family balance.
- (8) When our company started, the amount of work I was expected to do was quite modest and so it was unnecessary for me to go to the office. Later we continued to have the same working arrangement, regardless of the bigger work load.

### **What are your personal reasons for opting for teleworking and homeworking work pattern?**

- (1) Home in a peripheral region; flexible work time; reduced commuting time
- (2) Necessity to make a living.

- (3) Opportunity to have a nice job that meets my qualifications.
- (4) Life style choice – opportunity to live in a rural community.
- (5) Additional income
- (7) The job I have is suitable for teleworking.
- (8) Opportunity to make more money.
- (9) I was sitting home with a baby and I decided to do some work.

**What do you think are the practices with teleworking and homeworking, both in your organisation (personally) and in general?**

- (1) Good in general, however, sometimes there may be problems with self-discipline.
- (2) Positive in general; greater freedom over working time.
- (4) I am happy with my working arrangement. My work is also my hobby.
- (5) Very positive. I can do work on the side.
- (7) It is good that I can have control over my work time.
- (8) It is an ideal work arrangement for an accountant.
- (9) Positive so far.

**What do you see as the personal challenges you face as a result of the practice of teleworking and homeworking?**

- (1) There is sometimes insufficient communication. Fewer opportunities for co-operation. Expensive to buy necessary equipment.
- (2) Problems with equipment, workplace. It consumes more time and energy to handle different problems.
- (4) The problems I might have do not occur as a result of the practice of teleworking but as a result of working as a freelancer. Sustainability or whether I have enough work to do is always a problem.
- (5) Problems with Internet access.
- (6) Sometimes it is hard to keep a strict boundary between work and private life.

**Do you have any strategies in place to deal with these challenges?**

- (1) To meet with the employer on a regular basis.
- (2) To provide myself with my own equipment.
- (5) Internet access is a regional problem and it should be taken care of by the service provider.

**Do you perceive that managers have any difficulties in coping with the introduction of teleworking and homeworking in your organisation?**

- (1) I do not think so.
- (2) It seems so.
- (5) No.
- (6) It does not seem so.

### **If so, what strategies do you have in place to deal with them?**

#### **What competencies do you think teleworkers and homeworkers need to manage teleworking and homeworking patterns?**

- (1) Basic computer skills; good communication skills; self-discipline
- (2) Self-discipline; self-sufficiency – ability to make decisions and find solutions independently
- (3) Independent thinking and decision making; ability to use communication technology
- (4) Responsibility and reliability – ability to deliver work on time, keep deadlines.
- (5) Computer skills.
- (6) Habit of independent work; ability of self-control and self-analysis.
- (7) The same professional skills as needed in the traditional workplace.
- (8) Computer skills.
- (9) Ability to use communication technology.

#### **What management style do you think needs to be in place to manage teleworkers and homeworkers ?**

- (1) Democratic
- (2) Flexible
- (3) Relatively flexible, but certain rules must be agreed upon.
- (4) Supportive – the employer should point out the good things the employee has done and also offer constructive criticism, if necessary. It helps to ensure that the employee is well-informed and knows how to avoid the mistakes he has made.
- (6) Clear rules should be put in place by the employer so as to ensure employee productivity.
- (7) The employer has to be very clear about what he expects from the employee. He should be able to understand that the employee cannot work 24 hours a day and should respect his privacy. Trust is a very important issue here.
- (8) The employer must ensure that every employee has access to relevant information.

(9) Most importantly, there should be mutual trust between the employer and the employee. If necessary, the employer should provide training for the employee to develop their skills and knowledge.

### **Question 15**

**What kinds of technology do you use to facilitate teleworking and homeworking?**

- (1) Computer, printer, mobile phone, car
- (2) Internet, MSN, ftp, e-mail
- (3) Internet, computer
- (4) Internet, computer
- (5) Internet, computer
- (6) Internet, computer
- (8) Internet, computer
- (9) Internet, phone

### **Any other comments/questions:**

(4) It has always been surprising for me that teleworking has not gained the popularity it was thought to do. People believed that rural communities would benefit from the use of teleworking. After all, there are many jobs that can be done from home by means of the Internet or Skype. But still people go to the other side of the world to attend a meeting! Probably the reason for this lies in the fact that people do not want to give up working in a group and meeting face-to-face with their colleagues – man is a social animal.

## **ESTONIA - HR AND MANAGEMENT INTERVIEW FRAMEWORK**

Interviewee/Organisation: NGO Eurohouse (1), Avon (2), Brightside (3)

Location: Saaremaa (1), Saaremaa (2), Hiiumaa (3)

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**Do you have any general definitions for what you consider as teleworking and homeworking? [Do you have examples of each?]**

(1) Teleworking – the work performed at a distance by a teleworker (employee, self-employed), involving the use of telecommunications to receive and complete work assignments. E.g., web design.

Homeworking – for example, an accountant receives work assignments in the office, works at home and later brings reports and other documents to the office.

I can identify here a different communication style – whereas teleworking is done by email and phone, homeworking involves face-to-face interaction.

(2) Teleworking is a form of work in which work is performed outside the central office. E.g. Avon sales representatives work at home, using phone and email to sell products.

(3) Homeworking is working in a home office or working part-time from home. E.g. web programmer.

**How would you define teleworking and homeworking in the context of your organisation?**

**[If any different from your general definitions]**

(1) We cannot see a need for such definitions. For example, our accountant is a homeworker.

(2) Telework is the work done by the sales representatives, all of who work from home. Our selling strategy is based on telework.

(3) We do not use specific definitions.

**In general terms what do you consider are the advantages of teleworking and homeworking? [Do you have some examples of each?]**

(1) Flexibility and lower costs. For example, we do not have to buy a computer or software for the accountant. Also, it provides a great opportunity to find work for people with disabilities or mothers at home with small children.

(2) The employees have greater flexibility in organising their working schedule. The company can save premises costs and office overheads. Telework could provide a source of additional income for women who are staying home with their children and cannot have a full-time job.

(3) More flexible work schedule; absence of “caste system” in the organisation; higher self-esteem; improved self-sufficiency

**In general terms what do you consider are the disadvantages of teleworking and homeworking? [Do you have some examples of each?]**

(1) Employee productivity might be lower. Exchange of information might be slower if the employee is not given work assignments face-to-face.

It is crucial that a homeworker has self-discipline.

(2) Lack of control over working time. Communication problems (no face-to-face meetings). Lack of social contacts.

(3) Blurring of the boundary between work and home. Risk of overwork (“I’ll just do this quickly”). Not enough exercise.

**To what extent is teleworking and homeworking utilised in your organisation?**

(2) All the sales representatives and regional heads are teleworkers.

(3) 90 per cent of the work time, with the exceptions of meeting with clients.

**How long has the organisation been using teleworking and homeworking?**

(1) Since we started – 12 years.

(2) Since 1993.

(3) 2 years.

**What were/are the main reasons and/or drivers for implementing teleworking and homeworking in your organisation?**

[EU and national government legislation?]

[Work/life balance?]

[Staff drivers e.g. demand it, needed to attract right talent]

(1) The above mentioned reasons, plus cost savings. We cannot offer a full-time job for the accountant.

(2) We need local sales representatives because selling from a central office would not work. We are also able to save office space costs.



(3) Cost savings.

**What do you think are the trends with teleworking and homeworking, both in your organisation and in general?**

(1) In general, both teleworking and homeworking have a great perspective. As alternative ways of working, they are very welcome, especially considering the current lack of workforce.

(2) Companies have been able to recruit more and more sales representatives who work on a telework basis.

(3) In the future, our management work will be done in the office and outsourcing will continue on a telework basis. The office staff will be entitled to work from home if they wish.

**What do you see as the challenges faced by your organisation regarding teleworking and homeworking both now and in the future?**

(1) Perhaps the employers need to be more encouraged to implement teleworking?

(2) As the employees may feel a weak sense of involvement with their coworkers, they are likely to have less motivation to work.

(3) It takes too much time to get feedback. Lack of cheap and fast Internet access, which would enable us to use good groupware solutions.

**Do you have any strategies in place to deal with these challenges?**

(1) To demonstrate good practices and success stories.

(2) We provide trainings for our sales representatives to give them a chance to meet their colleagues and improve their skills. We use different methods to increase motivation.

(3) To keep up with the development of technology.

**Do you perceive that managers have any difficulties in coping with the introduction of teleworking and homeworking in your organisation?**

- (1) No.
- (2) No.
- (3) No.

**If so, what strategies do you have in place to deal with them?  
[Training?]**

**What competencies do you think managers need to manage teleworking and homeworking employees?**

- (1) Good communication skills. The employer has to be very clear and concise about work assignments or when giving explanations.
- (2) The employer must be able to motivate the employee and offer opportunities to improve skills and competencies (trainings, meetings, etc). A sales representative must be reliable, willing to learn and have good communication skills.
- (3) Good written communication skills, ability to make oneself clear in writing.

**What management process do you think need to be in place to manage teleworking and homeworking employees?**

- (1) Efficient communication process.
- (2) The employer and employee must be able to cooperate. Certain rules and procedures must be established regarding selling process, reporting, customer service, training opportunities, etc.
- (3) The instructions given by the employer must be as concise as possible in order to minimise the opportunity for errors.

**What kinds of technology do you use to facilitate teleworking and homeworking?**

- (1) Internet.
- (2) Internet, phone, fax, post
- (3) Internet, phone, Skype.